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18 December 2009

Mr Lyndon Rowe
Chairman
Economic Regulation Authority
6th Floor
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PERTH WA 6000

By Hand

Dear Mr Rowe

Goldfields Gas Pipeline - Proposed Revisions to Access Arrangement – Public Submission of Response to Draft Decision

I refer to our letter dated 11 December 2009 in which GGT advised that GGT would as soon as reasonably practical provide a public version of the Submission in response to the Draft Decision.

Please find attached GGT Public Submission in response to the Draft Decision.

In this Public Submission, GGT has deleted some of the information that was contained in the Confidential Submission dated 11 December 2009 that is considered to be confidential and has identified such deletions by the insertion of the words: "[Information Confidential]".

The Public Submission will also be provided electronically on CDRom.

GGT looks forward to working with the Authority during the continuing assessment process.

Yours faithfully

David King
General Manager

GOLDFIELDS GAS PIPELINE

Response to Draft Decision to Proposed Revisions to Access Arrangement

Submitted to Economic Regulation Authority

Public Submission

18 December 2009

Contents

1 Introduction

1.1 Preamble

1. This Submission is lodged by Goldfields Gas Transmission Pty Ltd ("GGT") in support of the proposed revisions to the Access Arrangement ("Revised Access Arrangement") and Access Arrangement Information ("AAI") for the Goldfields Gas Pipeline ("GGP") lodged on 23 March 2009. The Revised Access Arrangement and AAI were prepared and lodged pursuant to Section 2 of the National Third Party Access Code for Natural Gas Pipeline Systems ("Code").

2. On 9 October 2009, the Economic Regulation Authority ("the Authority") issued its draft decision on the proposed revisions. The Authority proposed not to approve GGT's Proposed Revisions on the basis that it believes the proposed revisions do not satisfy the requirements in sections 3.1 to 3.20 of the Code or the principles in section 8 of the Code. The detailed reasons for this decision are set out in the Authority's Draft Decision.

3. The Authority requires 48 amendments to approve GGT's Proposed Revisions.

4. Pursuant to Section 2.15A of the National Gas Code, GGT will resubmit the proposed amended Access Arrangement, revised so as to incorporate or substantially incorporate the amendments specified by the Authority in its draft decision or otherwise addressing the matters the Authority identified in its draft decision as being the reasons for requiring the amendments specified in its draft decision.

5. This submission:

   - identifies those amendments which GGT accepts and has incorporated in the accompanying proposed revised Access Arrangement and Access Arrangement Information; and
   - identifies those amendment which GGT does not accept, and either outlines the reasons for non-acceptance or otherwise addresses them as required by section 2.15A of the Code,

6. In some cases the Draft Decision also requires GGT to provide the Authority with further information before the making of the Final Decision in relation to GGT's Proposed Revisions. GGT has engaged with the Authority to provide this information as required.

7. Projections in this Submission have been prepared to meet the requirements of the Code and are based on a number of assumptions. GGT does not make any representation or warranty as to the accuracy of the assumptions.

8. The following points apply throughout the Submission:

   - Totals shown in tables may not equal the sum of the elements of the tables due to rounding;
   - Years shown in tables refer to calendar years unless otherwise indicated;
   - Financial values shown in tables are nominal values unless otherwise indicated; and
   - References to the Authority or ERA refer to the relevant regulator, being the Economic Regulation Authority.

1.2 Proper Approach to Exercise of Regulatory Discretion

9. In assessing the proposed revisions to the Access Arrangement, the Authority must exercise its discretion having regard to relevant provisions of the Code, including the factors set out in Section 2.24.

10. The correct approach to the exercise of discretion by the Regulator under the Code has been the subject of a number of judicial decisions, including:

- *Re Michael; Ex Parte Epic Energy (WA) Nominees Pty Ltd* (2002) 25 WAR 511;
- *Re GasNet Australia (Operations) Pty Ltd* [2003] A Comp T 6;
- *Re East Australian Pipeline Limited* [2004] A Comp T 8;
- *ACCC v ACT* [2006] FCAFC 83; and
- *East Australian Pipeline Pty Ltd v ACCC* (2007) 233 CLR 229.

11. This body of law has identified that the following principles should be applied to the exercise of discretionary power under the Code.

(a) In assessing a proposed Access Arrangement, the Regulator is required to take into account the section 2.24(a) factors and give them weight as fundamental elements.

(b) These factors must guide the Regulator in the assessment of aspects of an AA which involve a discretionary element, including the application of the Reference Tariff Principles in part 8 of the Code.

(c) In relation to matters such as the determination of the Reference Tariff, there is no single correct figure involved in assessing the values of the parameters to be applied in the determination. The application of the Reference Tariff Principles involves issues of judgment and degree where different minds, acting reasonably, may make different choices within a range of possible choices, each of which will comply with those Principles.

(d) Where there are no conflicts or tensions in the application of such principles, and where the proposal falls within the range of choice reasonably open and consistent with the principles, it is beyond the power of the Regulator not to approve the proposal simply because it prefers a different outcome which it believes would better achieve the Regulator's understanding of the Code objectives.

(e) The essential task of the Regulator is therefore to determine whether or not the different elements of the proposed AA are consistent with the relevant Code provisions in the sense that they fall within a reasonable range of compliant outcomes. Accordingly, where the Service Provider chooses to use a model, methodology or other approach which is sanctioned by relevant provisions of the Code, it is not open to the Regulator to require the application of some other model, methodology or approach simply because it believes that to do so would produce a better outcome in terms of the relevant Code objectives.

(f) It is wrong for the Regulator to arrive at a decision in relation to a particular aspect of a proposed Access Arrangement in order to achieve some other predetermined result.

(g) The Regulator must have regard to the legitimate business interests of the proponent and should not put itself in an adversary position in relation to the proponent so that it may be perceived as a champion of other interests.

12. GGT contends that in many parts of the Draft Decision, the Authority has impermissibly rejected aspects of the proposed revisions to the Access Arrangement notwithstanding that the proposal falls within a reasonable range of outcomes consistent with the Code principles. These matters are commented on in more detail in the relevant sections of this submission which follow.

1.3 Index to Amendments

13. The following table provides an index of the section of this submission in which each of the Draft Decision's amendments are addressed.

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Amendment	Subject	Addressed in section
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2 Inclusion of Uncovered Capacity

14. Amendment 3 provides: In relation to the GGP Capital Base, Table 2 and Table 3 of the Access Arrangement Information should be amended to reflect the values in Table 2 and Table 4 of the Draft Decision respectively.

15. Amendment 4 provides: In relation to the GGP Capital Base and Depreciation Table 2 of the Access Arrangement Information should be amended to reflect the values in Table 6 of this Draft Decision.

16. Amendment 5 provides: In relation to the Forecast Capital expenditure Tables 4 of the Access Arrangement Information should be amended to reflect the values in Tables 8 of this Draft Decision.

17. Amendment 6 provides: In relation to Working Capital, Table 7 of the Access Arrangement Information should be amended to reflect the values in Table 10 of this Draft Decision.

18. Amendment 7 provides: In relation to Depreciation Table 6 of the Access Arrangement Information should be amended to reflect the values in Table 13 of this Draft Decision.

19. Amendment 10 provides: In relation to Non Capital Costs, Table 10 of the Access Arrangement Information should be amended to reflect the values in Table 19 of the Draft Decision.

20. Amendment 11 provides: In relation to Total Revenue, Table 1 and Table 14 of the Access Arrangement Information should be amended to reflect the values in Table 22 of the Draft Decision.

21. Amendment 12 provides: Table 12 of the Access Arrangement Information setting out volume forecasts in TJ/day should be amended to include volume forecasts for the Additional Services arising from the Expansions of Capacity as set out in Table 26 of the Draft Decision.

22. Amendment 13 provides: Table 15 of the Access Arrangement Information setting out the Annual Reference Service Revenue for 2010 to 2014 should be amended to include the values set out in Table 28 of the Draft Decision.

23. Amendment 14 provides: The Reference Service Revenue referred to at page 13 of the Access Arrangement Information should be amended from $15.9 million to $367.1 million.

24. Amendment 15 provides: Clause 1 of the Fourth Schedule to Appendix 3 to GGT's Proposed Revisions should be amended to delete the Reference Tariff charges and substitute the Authority's Draft Decision Reference Tariff charges shown in Table 29 of this Draft Decision.

25. Amendment 16 provides: The Access Arrangement Information should be amended to delete the forecast annual revenue to be recovered from providing the Reference Service as set out in Table 15 in the Access Arrangement Information, and to substitute the values set out in Table 31 of this Draft Decision.

26. These amendments affected by the conclusion regarding the treatment of the Expansions of Capacity, are referred to as the "Relevant Amendments" in this submission.

27. The effect of these amendments is that the actual and forecast costs, revenues and volumes relating to the uncovered expanded capacity developed by GGT since the

approval of the current Access Arrangement must be taken into account in determining the Reference Tariff. GGT submits that these amendments are beyond the power of the regulator and/or are unreasonable in all the circumstances.

2.1.1 Introduction

28. Since the approval of the current Access Arrangement in 2005, GGT has expanded the GGP through the development and construction of three compressor stations and associated assets (Paraburdoo 2, Wyloo West, Ned's Creek) ("Expansion Assets") on the basis of commercially negotiated transportation agreements with third party users. The capital costs of the Expansion Assets are approximately $78-$79 million (the precise figure has not yet been finalised).

29. These expansions and the associated transportation services are referred to in the Draft Decision (Ref. Draft Decision paragraphs 138 and 136 respectively) as the 'Expansions of Capacity' and the 'Additional Services' respectively[1] .

30. In accordance with clause 10.3 of the approved Access Arrangement, GGT has elected not to treat the capacity created by the Expansion Assets as part of the Covered Pipeline. The Draft Decision recognises that these elections were validly made in accordance with the approved Access Arrangement (Ref. Draft Decision paragraph 174).

31. As required by the Code, the proposed revised Access Arrangement submitted by GGT has been prepared in connection with the Covered Pipeline[2] . Accordingly, it does not include the capital or non capital costs of the Expansions of Capacity in the derivation of the Total Revenue, and does not include the volumes associated with the Expansions of Capacity in the derivation of the Reference Tariff.

32. The Draft Decision concludes that, for the purposes of the revised Access Arrangement, all actual and forecast costs, revenues and volumes relating to the Expansions of Capacity must be taken into account in determining the Reference Tariff (Ref. Draft Decision paragraph 198). This is reflected in, or affects, a number of Amendments – numbers 3, 4, 5, 6, 7, 10, 11, 12, 13, 14, 15 and 16.

33. The consequence of the Draft Decision is that the Reference Tariff payable by Users of the Covered Pipeline is lower than would otherwise have been the case. As Users of the Expansions of Capacity do not pay the Reference Tariff, the Draft Decision will not result in a reduction of the tariffs payable by them.

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[1] As defined by section 10.8 of the Code, "Capacity" and "Services" both relate to the Covered Pipeline. The use of terminology which implies that the uncovered capacity of the pipeline, and the associated transportation services, are respectively "Capacity" and "Services" is unfortunate. GGT does not agree that there has been an expansion of Capacity (as that term refers to the Covered Pipeline) or that the services arising from the development of the Expansion Assets are Services but for the purposes of this submission will adopt the terminology adopted in the Draft Decision

[2] Code, section 2.2 requires the establishment of an Access Arrangement for a Covered Pipeline. Section 2.28 requires a Service Provider to lodge proposed revisions to an approved Access Arrangement by the relevant date.

2.1.2 Reasons for the Draft Decision

34. The required amendments are based on the matters set out in paragraphs 134 to 198 of the Draft Decision. The Authority's conclusions and reasoning are as follows:

(a) The Expansions of Capacity are not to be treated as part of the Covered Pipeline (Ref. Draft Decision paragraph 174); the capital assets constructed, developed or acquired[3] to enable GGT to provide the Expansions of Capacity do not form part of the Covered Pipeline (Ref. Draft Decision paragraph 187); and the Additional Services are not Reference Services which are subject to the GGT's access obligations under the Access Arrangement (Ref. Draft Decision paragraphs 177 and 178).

(b) While the Expansions of Capacity do not form part of the Covered Pipeline, the Additional Services are, nevertheless, provided by means of the Covered Pipeline, in the same way as Services provided prior to the expansions (Ref. Draft Decision paragraph 184), and are therefore 'Services' as defined in Section 10.8 of the Code (Ref. Draft Decision paragraph 185).

(c) As the Additional Services are 'Services', it follows that GGT has developed the Expansion Assets 'to enable GGT to provide Services' and so those capital assets fall within paragraph (c) of the definition of 'New Facilities' in Section 10.8 of the Code (Ref. Draft Decision paragraph 188).

(d) For this same reason the capital costs of the Expansion Assets are to be taken into account in determining 'Total Revenue' in Section 8.4 of the Code because they are 'otherwise used to provide Services' (Ref. Draft Decision paragraph 186) and, as a result, these assets form part of and must be included in the Capital Base (Ref. Draft Decision paragraph 187) for the purpose of determining Total Revenue and Reference Tariffs.

(e) If GGT's Proposed Revisions were accepted and the Expansion Assets were excluded from the Capital Base, this 'could result in pricing distortions' (Ref. Draft Decision paragraph 189) and could result in 'Users of the Reference Tariffs subsidising the Users of the Expansions of Capacity'. This, the Authority says, 'would be inconsistent with the Reference Tariff Principles in Section 8 of the Code, in particular those set out in Section 8.1 and Section 8.38 of the Code' (Ref. Draft Decision paragraph 190).

35. The reasoning which led to the Authority's decision in relation to the capital costs of the Expansions of Capacity (Amendment 3) is relied upon by the Authority to support the related amendments in relation to non capital costs (Ref. Draft Decision paragraphs 577, 643); Total Revenue (Ref. Draft Decision paragraphs 655, 658); volumes (Ref. Draft Decision paragraph 696) and derivation of Reference Tariffs (Ref. Draft Decision paragraphs 740, 746, 748).

2.1.3 Summary of Submissions

36. By reason of one or more of the matters discussed in this submission, the Authority has misinterpreted the Code in arriving at the Relevant Amendments, has failed to correctly identify the issues it must address in exercising its discretion to approve the revised Access Arrangement, and has otherwise acted unreasonably. As a result the Draft

[3] For convenience, the term "developed" is used to refer to "construct, develop or acquire"

Decision is incorrect and the Authority would be acting in excess of its authority and jurisdiction, and would be misconceiving its functions and powers, if it were to approve its own Access Arrangement reflecting the Relevant Amendments.

37. The correct conclusions are that:

(a) the Expansions of Capacity and the Expansion Assets developed to provide the Expansions of Capacity, do not form part of the Covered Pipeline for any purpose under the Code (refer to Submission paragraphs 49 to 51);

(b) the Additional Services are provided by means of the Expansions of Capacity, and not by means of the Covered Pipeline (refer to Submission paragraphs 52 to 54);

(c) the Code mandates that the Additional Services are not Services (refer to Submission paragraphs 55 to 64); and

(d) the Expansion Assets are not "otherwise used to provide Services" (refer to Submission paragraphs 65 to 66).

38. The Authority's conclusion that the Additional Services are Services is incorrect because:

(a) it ignores s 3.16(a)(ii) of the Code (refer to Submission paragraphs 67 to 68);

(b) it ignores the words, intent and implications of the definition of "Covered Pipeline" (refer to Submission paragraphs 69 to 70);

(c) it is based on a failure to properly or correctly consider the meaning of whether a service is provided "by means of" the Covered Pipeline (refer to Submission paragraphs 71 to 79);

(d) it may be relying on an artificial distinction between the Additional Services being provided "by virtue of" the Expansions of Capacity or "by means of" the Covered Pipeline (refer to Submission paragraphs 80 to 81); and

(e) it contradicts, and is inconsistent with, the Authority's correct conclusions that the Expansions of Capacity are not to be treated as part of the Covered Pipeline (Ref. Draft Decision paragraph 188) and that the capital assets constructed, developed or acquired to enable GGT to provide the Expansions of Capacity do not form part of the Covered Pipeline (Ref. Draft Decision paragraph 187) (refer to Submission paragraphs 82 to 85).

39. The decision that the Expansion Assets are "otherwise used to provide Services" is incorrect for the same reasons the Authority's conclusion that the Additional Services are provided by means of the Covered Pipeline is incorrect and also because:

(a) it is based on an incorrect construction of the definition of "New Facility" (refer to Submission paragraphs 86 to 89);

(b) it ignores the legislative background to the introduction of paragraph (c) of the definition of "New Facility" (refer to Submission paragraphs 90 to 96); and

(c) it makes the same errors in relation to the definition of "Capital Base" (refer to Submission paragraphs 97 to 98).

40. Accordingly, and contrary to the Authority's conclusions:

(a) the Additional Services are not provided by means of the Covered Pipeline and are therefore not "Services" within the meaning of the Code;

(b) the Expansion Assets developed by GGT to provide the Expansions of Capacity are not assets which are "otherwise used to provide Services"; and

(c) the costs of those assets and the costs of providing Additional Services cannot be included in the calculation of the Total Revenue for the Covered Pipeline, and the volumes associated with the Expansions of Capacity cannot be included in the derivation of Reference Tariffs.

41. Further, the Amendments are erroneous or otherwise unreasonable because:

(a) the Draft Decision is based on a failure to understand the scheme of the Code (refer to Submission paragraphs 99 to 104);

(b) if correct, the Draft Decision leads to absurd outcomes (refer to Submission paragraphs 105 to 11070);

(c) the Draft Decision fails to give effect to the approved Access Arrangement (refer to Submission paragraphs 111 to 112);

(d) the amendments rely on incorrect conclusions in relation to consistency with the Reference Tariff Principles (refer to Submission paragraphs 113 to 118);

(e) the regulator has failed to consider GGT's legitimate business interests (refer to Submission paragraphs 119 to 125); and

(f) the Amendments are otherwise unreasonable (refer to Submission paragraphs 126 to 128).

2.1.4 Provisions of the Code

42. For convenience we repeat at this point some of the relevant provisions of the Code.

43. The preamble to Section 1 of the Code, dealing with coverage, states:

> *"An extensions/expansions policy in the Access Arrangement for a Covered Pipeline will define when an extension to, or expansion of the Capacity of, a Covered Pipeline will be treated as part of the same Covered Pipeline and when that extension or expansion is to be regarded as a separate Pipeline which may be the subject of a separate Coverage application."*

44. Section 1.40 of the Code states:

> *An extension to, or expansion of the Capacity of, a Covered Pipeline shall be treated as part of the Covered Pipeline for all purposes under the Code if the Extensions/Expansions Policy contained in the Access Arrangement for that Covered Pipeline provides for that extension or expansion to be treated as part of the Covered Pipeline.*

45. Section 3.16(a) of the Code states:

> *3.16 An Access Arrangement must include a policy (an Extensions/Expansions Policy) which sets out:*
>
> *(a) the method to be applied to determine whether any extension to, or expansion of the Capacity of, the Covered Pipeline:*
>
> *(i) should be treated as part of the Covered Pipeline for all purposes under the Code; or*
>
> *(ii) should not be treated as part of the Covered Pipeline for any purpose under the Code;*

(for example, the Extensions/Expansions Policy could provide that the Service Provider may, with the Relevant Regulator's consent, elect at some point in time whether or not an extension or expansion will be part of the Covered Pipeline or will not be part of the Covered Pipeline);"

46. Section 10.8 of the Code defines 'Capacity', 'Covered Pipeline', 'Reference Service' and 'Service' as follows:

"Capacity" means the measure of the potential of a Covered Pipeline as currently configured to deliver a particular Service between a Receipt Point and a Delivery Point at a point in time.

"Covered Pipeline" means, subject to Sections 2.3 and 2.4, the whole or a particular part of a Pipeline or Proposed Pipeline which is Covered and any extension to, or expansion of the Capacity of, that Covered Pipeline which is to be treated as part of the Covered Pipeline in accordance with the Extensions/Expansions Policy contained in the Access Arrangement for that Covered Pipeline and any expansion of that Covered Pipeline required to be installed under Section 6.22.

'New Facility' means:

(a) any extension to, or expansion of the Capacity of, a Covered Pipeline which is to be treated as part of the Covered Pipeline in accordance with the Extensions/Expansions Policy contained in the Access Arrangement for that Covered Pipeline;

(b) any expansion of the Capacity of a Covered Pipeline required to be installed under section 6.22; and

(c) any capital asset constructed, developed or acquired to enable the Service Provider to provide Services including, but not limited to, assets required for the purposes of facilitating competition in retail markets for Natural Gas.

"Reference Service" means a Service which is specified in an Access Arrangement and in respect of which a Reference Tariff has been specified in that Access Arrangement.

"Service" means:

(a) a service provided by means of a Covered Pipeline (or when used in Section 1 a service provided by means of a Pipeline) including (without limitation);

(i) haulage services (such as firm haulage, interruptible haulage, spot haulage and backhaul); and

(ii) the right to interconnect with the Covered Pipeline, and

(b) services ancillary to the provision of such services,

but does not include the production, sale or purchasing of Natural Gas.

2.1.5 Note

47. The Draft Decision suggests several times that if GGT had elected to treat the Expansions of Capacity as part of the Covered Pipeline, Users would have had the right to acquire the Additional Services as Reference Services (Ref. Draft Decision paragraphs 162, 177, 178, 185, 190). There is no apparent consideration of whether, even if GGT had made that election, the Additional Services could be Non-Reference Services, being Services offered under the Access Arrangement for which there is no

Reference Tariff established. Similarly, the Draft Decision is incorrect in the assumption that a Service Provider is only obliged to provide a Service if it is one of the Services described in the Access Arrangement (Ref. Draft Decision paragraph 56).

48. There is nothing in the Draft Decision to suggest that the Authority's conclusions would have been different had it been expressly recognised that there can be Services offered under an Access Arrangement which are not Reference Services, or that Services other than those described in the Access Arrangement can be negotiated between the Service Provider and a User. For completeness, GGT submits that the Draft Decision's incorrect conclusions, and the correct interpretation of the Code, are not affected by whether the Additional Services are regarded as Reference Services or Non-Reference Services, or the incorrect understanding as to when Services are available.

2.1.6 Submissions – correct conclusions

49. Expansions of Capacity do not form part of Covered Pipeline for any purpose.

50. The Authority is correct that GGT has the ability to elect, and has validly elected, under Section 10.3 of the approved Access Arrangement that the Expansions of Capacity are not to be treated as part of the Covered Pipeline (Ref. Draft Decision paragraphs 174, 188). By virtue of this election, the Additional Services will not be subject to the Access Arrangement (Ref. Draft Decision paragraph 177, 178).

51. The Authority is also correct that the Expansion Assets which were developed to enable GGT to provide the Expansions of Capacity do not form part of the Covered Pipeline (Ref. Draft Decision paragraph 187).

52. Additional Services are provided by means of the Expansions of Capacity, not by means of the Covered Pipeline.

53. The Code does not provide a definition as to when a service is or is not provided "by means of" a Covered Pipeline. For the following reasons, GGT submits that in respect of the Expansions of Capacity, the correct conclusion is that the Additional Services are not provided "by means of" the Covered Pipeline, but "by means of" the Expansions of Capacity:

    (a) This conclusion is consistent with the express recognition in the Code that expansions of the capacity of a Covered Pipeline may, in accordance with an Extensions/Expansions Policy, not be part of the Covered Pipeline. It is inconsistent to regard the transportation services associated with the uncovered Expansions of Capacity and Expansion Assets as being provided by means of the Covered Pipeline.

    (b) Similarly, absent coverage, new assets and the services available as a result of those assets are outside the operation of the Code. It is inconsistent with this to say that transportation services which can only be provided because of the existence of uncovered Expansions of Capacity and the Expansion Assets are Services for the purposes of the Code.

54. The Covered Pipeline has a capacity of 109 TJ/day[4]. The Additional Services are able to be provided because of the development of the Expansions of Capacity. It is

[4] GGT has identified a small error in its 2010 - 2014 Volume Forecast. The correction of this error, amounting to 1 TJ/day (i.e. approximately 0.9% of total load)

therefore reasonable to conclude, as a matter of interpretation, that the Additional Services are provided by means of the Expansions of Capacity. It is not possible to conclude that the Additional Services – which the Covered Pipeline could not provide -- are Services provided by means of the Covered Pipeline.

55. The proposition that Additional Services are not "Services" is mandated by the Code (Sections 3.16(a)(ii), 1.40 and definition of "Covered Pipeline").

56. What is submitted above is mandated by the words, intent, implications and scheme of the Code.

57. First, there is Section 3.16(a)(ii) of the Code. Under that section, an Access Arrangement must include a policy which sets out the method to be applied to determine whether any expansion of the Capacity of a Covered Pipeline 'should be treated as part of the Covered Pipeline for all purposes under the Code' or 'should not be treated as part of the Covered Pipeline for any purpose under the Code'. This requires that an expansion of Capacity be treated either as part of the Covered Pipeline for all purposes or not part of it for any purposes.

58. Section 3.16(a)(ii) of the Code authorises a service provider to include in its Access Arrangement a policy which sets out "the method to be applied to determine whether any extension to, or expansion of, the Capacity of, the Covered Pipeline should not be treated as part of the Covered Pipeline for any purpose under the Code". That entails the proposition that where an Access Arrangement contains such a policy, and the service provider has complied with the policy in relation to an expansion of the Capacity (as that term is defined in Section 10.8 of the Code) of the Covered Pipeline, the expansion of Capacity cannot be treated as part of the Covered Pipeline "for any purpose".

59. Therefore:

(a) Services that are provided by means of expanded capacity which does not form part of the Covered Pipeline "for any purpose under the Code" cannot be Services that are provided by means of the Covered Pipeline; and

(b) the Additional Services being services which are provided by virtue of the Expansions of Capacity cannot be Services provided by means of the Covered Pipeline because the Expansions of Capacity are not part of the Covered Pipeline.

60. Second, there is Section 1.40 of the Code. That section provides that an expansion of the Capacity of the Covered Pipeline must be treated as part of the Covered Pipeline for all purposes under the Code if the Extensions/Expansions Policy contained in the Access Arrangement for the Covered Pipeline provides for that expansion to be treated as part of the Covered Pipeline. As with Section 3.16(a)(ii) of the Code, this implies that an expansion of the Capacity of the Covered Pipeline is not to be treated as part of the Covered Pipeline under the Code if the Expansions Policy contained in the Access Arrangement for the Covered Pipeline provides that the expansion is not to be treated as part of the Covered Pipeline.

61. Third, there is the definition of "Covered Pipeline". That definition makes it clear that only an expansion of the Capacity of a Covered Pipeline "which is to be treated as part of the Covered Pipeline in accordance with the Extensions/Expansions Policy contained in the Access Arrangement" forms part of the Covered Pipeline. Expansions of the Capacity of a Covered Pipeline which are not to be treated as part of the

Covered Pipeline in accordance with the Expansions Policy contained in the Access Arrangement are not to be treated as part of the Covered Pipeline.

62. What is submitted about the definition of Covered Pipeline is reinforced by the preamble to Section 1 of the Code:

> *An extensions/expansions policy in the Access Arrangement for a Covered Pipeline will define when an extension to, or expansion of the Capacity of a Covered Pipeline will be treated as part of the same Covered Pipeline and when that extension or expansion is to be regarded as a separate Pipeline which may be the subject of a separate Coverage application.*

63. The scheme of the Code is clear:

(a) the expansions policy in the Access Arrangement determines when an expansion of Capacity will be treated as part of the Covered Pipeline and;

(b) if an expansion of Capacity is not treated as part of the Covered Pipeline, it is 'to be regarded as a separate Pipeline'.

64. It follows from paragraphs 52 to 63 above that the Additional Services, being Services which are provided by means of the Expansions of Capacity, are not provided by means of the Covered Pipeline and therefore are not Services. It also follows, contrary to the Authority's decision, that the capital assets constructed, developed or acquired to provide the Expansions of Capacity are not part of the Covered Pipeline, and cannot be included in the Total Revenue of the GGP.

65. Expansion Assets are not "otherwise used to provide Services".

66. By definition, Services are Services provided by means of the Covered Pipeline. As the Expansions of Capacity and the Expansion Assets are not part of the Covered Pipeline, it is not possible to conclude that the Expansions of Capacity are "otherwise used to provide Services" [that is, Services provided by means of the Covered Pipeline].

2.2 Submissions – Authority's conclusion that the Additional Services are "Services" is incorrect

2.2.1 Draft Decision ignores s 3.16(a)(ii) of the Code

67. For the reasons submitted above, the Authority's conclusion is incorrect because it ignores the words and intent of 3.16(a)(ii) of the Code.

68. The Authority's conclusion also gives no scope for Section 3.16(a)(ii) of the Code to operate: on the approach in the Draft Decision, transportation services provided as a result of an expansion would always be Services regardless of whether or not a Service Provider elected that an expansion of capacity is to be uncovered.

2.2.2 Draft Decision ignores definition of "Covered Pipeline"

69. For the reasons submitted above, the Authority's conclusion is also incorrect because it ignores the words, intent and implication of the definition of Covered Pipeline contained in the Code. The language of the Code is clear – Section 10.8 defines Covered Pipeline to mean:

> *Subject to Sections 2.3 and 2.4, the whole or a particular part of a Pipeline or proposed Pipeline which is Covered and any extension to, or expansion of the Capacity of, that Covered Pipeline which is to be treated as part of the Covered Pipeline in accordance with the Extensions/Expansions Policy*

> *contained in the Access Arrangement for that Covered Pipeline and any expansion of that Covered Pipeline required to be installed under Section 6.22.*

70. The only manner in which an expansion of the Capacity of a Covered Pipeline can become part of the Covered Pipeline is pursuant to the Extensions/Expansions Policy, an application for coverage under Section 1 of the Code or as a result of an expansion ordered by an arbitrator under Section 6.22 of the Code. None of these circumstances applies to the Expansions of Capacity.

2.2.3 Failure to properly consider meaning of "by means of"

71. The Draft Decision gives only cursory consideration to whether the Additional Services are provided "by means of" the Covered Pipeline. Draft Decision paragraph 184 does not contain any analysis of the term – it is assumed that because the Additional Service is substantively the same sort of service as the Reference Service (being the transportation of gas), and because the Reference Service is provided "by means of" the Covered Pipeline, then the gas transported under the Additional Service is carried 'by means of' the Covered Pipeline.

72. The Code specifically accommodates and provides for the concept of uncovered expanded capacity. "Services" (as defined in Section 10.8 of the Code) are limited to those Services provided by *means* of the Covered Pipeline. In this context, the mere fact that the transportation Services provided by means of the expanded capacity are similar to those provided by means of the Covered Pipeline, is not sufficient to support the conclusion that the expanded capacity services are provided "by means of" the Covered Pipeline.

73. The Code provides a framework for access to Services provided by means of pipelines, or parts of pipelines, which are Covered, and for setting the terms and conditions including benchmark tariffs for access to those Services. Unless and until a pipeline or part of a pipeline is Covered, the Code has no application to it. Once this is recognised, the conclusions in the Draft Decision are clearly incorrect.

74. One of the key provisions of the Code – the right of third parties to obtain access to Services, enforceable by arbitration – is called into operation when a pipeline or part of a pipeline is Covered. Third parties have the right to notify an access dispute to the arbitrator where the User and the Service Provider are unable to agree on the terms of a Service (Section 6.1 of the Code) and the arbitrator may order the Service Provider to provide a Service (Section 6.8(a) of the Code). A dispute cannot be notified unless an Access Arrangement has been established (Section 6.1 of the Code). In arbitrating the dispute, the arbitrator must apply the provisions of the Access Arrangement and must consider (among other things) a number of matters relating to the Covered Pipeline (Section 6.15 of the Code).

75. However, as the Authority correctly concludes, because the Expansions of Capacity are not part of the Covered Pipeline, Users do not have the right to demand Services on the terms of the Access Arrangement (Ref. Draft Decision paragraph 177, 178). Further the assets essential to the provision of the Additional Services are not part of the Covered Pipeline. And no Access Arrangement has been established for the Expansions of Capacity. How, then, are tariffs to be determined on an arbitration?

76. In contrast, if the Additional Services are recognised as being provided by means of the Expansions of Capacity, then a logical situation results. If an application is successfully made for Coverage of the Expansions of Capacity, then an Access

Arrangement will be required, setting out the terms and conditions of access; Reference Tariffs will be developed reflecting the costs of developing the Expansion Assets which are used to provide the Additional Services; and in the event of a dispute third parties will have a meaningful right of access in which the arbitrator could set tariffs having regard to the costs of the expansion.

77. Further, the interpretation that the Additional Services are provided by means of the Expansions of Capacity or by means of the Expansion Assets is consistent with the express recognition in the Code that expansions of the capacity of a Covered Pipeline may be uncovered and therefore outside the purview of the Code. Absent Services being provided by a pipeline which is Covered, the Code has no application to those Services. In the context of an uncovered expansion of the Capacity of a Covered Pipeline, this dictates that the transportation services associated with those expansions of Capacity cannot be seen as provided by means of the Covered Pipeline, and the costs cannot be taken into account in determining tariffs under the Code.

78. It can safely be assumed that the framers of the Code well understood that the most common way of expanding the capacity of a pipeline is to add compression and that additional services provided by virtue of such expansions use the same physical pipeline. Notwithstanding that fact, the Code directs that an expansion of Capacity should only be treated as part of the Covered Pipeline in clearly defined circumstances. The expressions 'treated as' or 'not treated as' appear to reflect an appreciation that, in reality, the same physical pipeline is used in either case. Certainly, given the provisions referred to above, and the scheme of the Code, the mere fact that gas molecules are transported through the original cylinder of steel is not enough by itself to mean that the Additional Services are provided "by means of" the Covered Pipeline.

79. The Code requires assessment of whether the Additional Service – being the transportation of gas as a result of the development of the Expansions of Capacity – is provided by means of the Covered Pipeline. It is beside the point that the Additional Services use the original cylinder of steel. (Ref. Draft Decision paragraph 184). To the extent that the conclusions in the Draft Decision relied on whether or not the Additional Services involve the possible physical transportation of molecules through the Covered Pipeline, the conclusions are erroneous.

2.2.4 Artificial distinction between "by means of" and "by virtue of"

80. The Draft Decision refers to the Additional Services being:

(a) provided "by reason of" (Ref. Draft Decision paragraphs 138, 186), and "by virtue of" the Expansions of Capacity (Ref. Draft Decision paragraphs 177, 182, 184, 185, 191), but

(b) provided "by means of" the Covered Pipeline (Ref. Draft Decision paragraph 184).

81. It is not clear whether this different use of language is intentional or, if it is, whether the Authority is of the view that the different use of language manifests any relevant distinction or if so, whether the Authority attaches any significance to the distinction. The Draft Decision contains no discussion of the distinction, or of its significance, if any, and presents only a cursory consideration of the meaning of "by means of". In any event, for the reasons submitted above, the Additional Service are not provided by means of the Covered Pipeline and any distinction which the Authority makes between

Services provided "by means of" the Covered Pipeline and Services provided "by virtue of" or "by reason of" the Covered Pipeline would be artificial.

2.2.5 Contradictory conclusions in conclusion

82. The Authority:

(a) recognises that the Additional Services, which are provided "by virtue of the Expansions of Capacity" will not be subject to the Access Arrangement as a consequence of GGT's election that the Expansions of Capacity are not part of the Covered Pipeline (Ref. Draft Decision paragraphs 177, 178). An Access Arrangement is therefore not required in relation to the Expansions of Capacity (Ref. Draft Decision paragraph 176);

(b) considers that had the Expansions of Capacity been part of the Covered Pipeline, Users would have had the right to acquire the Additional Services as Reference Services at the Reference Tariff (Ref. Draft Decision paragraph 177); and

(c) concludes the Additional Services are Services (because they are Services provided by means of the Covered Pipeline) (Ref. Draft Decision paragraph 185).

83. These conclusions are inconsistent and cannot stand together. This is because, if the Additional Services are in fact Services as referred to in paragraph 82(c) above, then the Code applies in relation to those Services: for example, the Regulator has the discretion under Section 3.28(a)(ii) of the Code to require the Access Arrangement to include the Additional Services as Reference Services, to which Users would be entitled to access at the Reference Tariff. However, as the Authority correctly recognises in paragraph 82(a), the Additional Services are not subject to the Access Arrangement; and as correctly recognised in paragraph 82(b), Users do not have the right to acquire the Additional Services at the Reference Tariff.

84. The Draft Decision also does not consider the apparent illogicality of a conclusion whereby:

(a) capital assets and the associated expanded capacity are not part of the Covered Pipeline, but

(b) transportation services which can be provided because of the development of those assets, are Services "provided by means of" the Covered Pipeline.

85. Submission – incorrect conclusion that the Expansion Assets are "otherwise used to provide Services".

2.2.6 Incorrect construction of definition of paragraph (c) of "New Facility"

86. The principles of statutory interpretation do not support the Authority's view that the capital costs incurred in developing the Expansions of Capacity are New Facilities under paragraph (c) (refer to Submission paragraph 46).

87. Paragraphs (a) and (b) (refer to Submission paragraph 46) of the definition expressly refer to expansions and extensions of capacity whereas paragraph (c) (refer to Submission paragraph 46) does not. The accepted approach to statutory interpretation is that, in the absence of any indication to the contrary, an expansion or extension that does not fit within the express wording of paragraph (a) or (b) (refer to Submission paragraph 46), is not intended to fall within the scope of the paragraph (c) (refer to Submission paragraph 46). There is no such contrary indication here. In other words it may be assumed that paragraph (c) (refer to Submission paragraph 46) is intended

to refer to 'any capital asset constructed, developed or acquired to enable the Service Provider to provide Services' other than those constructed, developed or acquired as part of an expansion or extension.

88. Further, if the Authority's conclusion is correct, the consequence would be that every asset that a service provider acquires constructs or develops for the purpose of expanding capacity will be a "New Facility" within the meaning of s 10.8 of the Code, even where the expansion of the capacity is not to be treated as part of a Covered Pipeline. That would be contrary to the intent of paragraph (a) of the definition of "New Facility" (refer to Submission paragraph 46), which paragraph entails or implies that only an expansion of the capacity of a Covered Pipeline which is to be treated as part of a Covered Pipeline is a New Facility.

89. Further, to read paragraph (c) (refer to Submission paragraph 46) as meaning that any asset that a service provider acquires, constructs or develops for the purpose of expanding capacity will be a "New Facility" within the meaning of s 10.8 of the Code, would have the effect of rendering paragraph (a) (refer to Submission paragraph 46) wholly superfluous. That would be contrary to the well-established principle of statutory construction that all words of an enactment must prima facie be given be given some meaning and effect (see, for example Pearce & Geddes Statutory Interpretation in Australia 6th ed paragraph 2.22 and the authorities there cited).

2.2.7 Draft Decision ignores legislative background to paragraph (c) of definition of "New Facility"

90. If there were any doubt about the interpretation of paragraph (c) (and GGT submits there is not), the legislative history of the paragraph confirms that it is not intended to apply to expansions in capacity.

91. The Code as originally enacted in 1997 did not include paragraph (c) (refer to Submission paragraph 46) in the definition of "New Facility" (refer to Submission paragraph 46). The paragraph was added by the Seventh Amending Agreement which came into operation on 17 April 2003, in response to concerns that paragraphs (a) and (b) (refer to Submission paragraph 46) did not enable recovery of ancillary capital expenditure incurred in providing Services, such as the cost of developing systems to implement full retail contestability. This history is demonstrated through the Annual Report of the Code Registrar, publications by the Office of Gas Access Regulation (WA) and the Commonwealth Treasury.

92. The Information Paper published by the Office of Gas Access Regulation (OFFGAR) on 27 December 2002 on Recovery of Costs - Introduction of Full Retail Contestability - Mid-West and South-West Gas Distribution Networks of Western Australia indicates the reason for the amendment.

93. In the Information Paper OFFGAR was considering a proposal by Alinta Gas Networks Pty Ltd for the recovery of the costs of developing a Network Management Information System (NMIS) associated with the introduction of full retail contestability. The Information Paper concluded that, because the NMIS was not provided by means of the Covered Pipeline itself, but rather was 'related to' haulage services, it did not provide a service ancillary to haulage services or interconnection services as referred to in the definition of 'Service' and, consequently, fell outside the definition of 'New Facility'. As the Information Paper shows, OFFGAR referred its interpretation to the National Gas Pipelines Advisory Committee (NGPAC) and noted that NGPAC might recommend to the responsible Ministers that the terms of the Code should be

amended so that capital costs of this type could be included in the Capital Base and recovered.

94. The amendments envisaged by OFFGAR in the Information Paper were made in April 2003 and, on 1 October 2003, OFFGAR made a Final Decision agreeing that the capital costs of NMIS would meet the requirements of Section 8.16 of the Code. This was based on the amendment of definitions in the Code including the definition of 'New Facility'. The Final Decision noted that the Seventh Amending Agreement resulted from NGPAC's recommendation to the responsible Ministers that the Code be amended "to provide for the recovery of capital costs incurred in the provision of ancillary Services".

95. Similarly, the 2002 Annual Report by the Code Registrar discusses the amendment in the context of capital expenditure ancillary to the provision of Services. There is no evidence to suggest that the Seventh Amending Agreement was intended to introduce a substantive change in the operation of the Code such that all capital spent by a service provider in expanding capacity, where that expansion of capacity did not form part of the Covered Pipeline, was to be included in the Capital Base for the Covered Pipeline and thus recoverable from Users of Services under a Reference Tariff.

96. Further confirmation of this is to be found in the Commonwealth Treasury's National Competition Policy Annual Report for 2003-2004 which refers to the Code change being to "clarify the definition of capital expenditure"[5] . This terminology is inconsistent with the concept that the introduction of paragraph (c) (refer to Submission paragraph 46) was intended to introduce a new category of expansion or extension capital.

2.2.8 Incorrect construction of definition of Capital Base

97. Section 8.4 defines the Capital Base as the capital assets that form the Covered Pipeline or are otherwise used to provide Services.

98. The words "or are otherwise used to provide Services" were added to the Code as part of the amendments contained in the Seventh Amending Agreement referred to above. For the reasons presented in relation to the intent and meaning of paragraph (c) of the definition of "New Facilities", GGT submits that the same legislative history indicates that the reference to assets "that are otherwise used to provide Services" is not intended to apply to expansions in Capacity of the Covered Pipeline.

2.2.9 Submissions – Amendments are otherwise incorrect or unreasonable

99. Failure to recognise scheme of the Code.

100. As discussed above in paragraphs 52 to 63, it is not permissible to treat the Additional Services as provided by means of the Covered Pipeline for one purpose and not provided by that means for another purpose. In light of GGT's election that the Expansions of Capacity do not form part of the Covered Pipeline, the Additional Services cannot be treated as being provided by means of the Covered Pipeline for any purpose under the Code.

101. The Authority's approach is to treat a permissible election to exclude an expansion as largely ineffective. Although effective during the current Access Arrangement Period, from the start of the next Access Arrangement Period the assets developed for the

[5] http://www.treasury.gov.au/contentitem.asp?NavId=020&ContentID=945 at section 7.3.2

purpose of the expansion are to be treated as part of the Capital Base and the costs of providing Additional Services are to be included in the costs of providing 'all Services' for the purpose of determining Total Revenue. This approach is quite inconsistent with the clear intention of the Code and makes the mechanism for elections to exclude expansions largely meaningless. If the framers of the Code had intended it to operate in this unexpected way, they could have easily included express provisions to this effect and would have been expected to do so. They did not. On the contrary, the clear intention of the Code is to allow expansions to be excluded altogether from its operation.

102. Further, the Draft Decision demonstrates a failure to understand the underlying premise, and specific requirements of, the Code – which is to establish an Access Arrangement which sets out the terms and conditions under which Users are entitled to access to a Covered Pipeline. The proper approach to assessing a proposed Access Arrangements, or revisions to an approved Access Arrangement, should be to ask:

(a) what is the "Covered Pipeline", and then

(b) what is the Total Revenue requirement for providing Services to Users of the Covered Pipeline, and then

(c) which Services under the Access Arrangement are to be Reference Services and which are to be non-Reference Services[6].

103. Instead, the Draft Decision effectively gives no meaning to the preliminary issue – which is what is the Covered Pipeline. Having correctly concluded that the Expansions of Capacity do not form part of the Covered Pipeline, and that therefore the Access Arrangement is not to deal with those Expansions of Capacity, that should have been an end to the Authority's consideration. However, having recognised in Draft Decision paragraph 174 that the Expanded Capacity is not part of the Covered Pipeline and that Users do not have a right of access to the Additional Services, the Draft Decision adopts an untenable interpretation of "Services" and "New Facilities" so as to bring the costs and volumes of the uncovered Expansions of Capacity within the provisions of the Code relating to calculating Total Revenue and Reference Tariffs for the Covered Pipeline.

104. Similarly, the Draft Decision adopts an interpretation which has the consequence that no Users are entitled to access to the Additional Services, and yet the Reference Tariff payable by Users of the Covered Pipeline is to be calculated to enable recovery of the capital and other costs of developing the Expansions of Capacity which are used to provide services to which they have no right of access. GGT submits that this is not consistent with the Reference Tariff Principles, or the general concept in the Code that Users should pay the cost of the services to which they have access.

2.2.10 Absurd outcomes

105. The Draft Decision produces an absurd result as it would mean that GGT could recover twice, under two Access Arrangements, the capital and non capital costs of the Expansions of Capacity.

[6] This is followed by determination of how Reference Tariffs are to be structured (including consideration of relevant cost allocation matters).

106. As the Expansions of Capacity are not part of the Covered Pipeline, it is open to third parties to apply under Section 1 of the Code for coverage of the Expansions of Capacity. Alternatively, GGT could cover the Expansions of Capacity by lodging a voluntary Access Arrangement under Section 2.3 of the Code. In both cases, a separate Access Arrangement for the Expansions of Capacity would be established, including derivation of Total Revenue and Reference Tariffs in accordance with the Code.

107. In this case, the Capital Base for the new Covered Pipeline comprising the Expansions of Capacity would be the capital costs of developing the Expansions of Capacity (Section 8.11 of the Code). However, those same capital costs will have already been taken into account under the Draft Decision. Similarly, the non capital costs to be recovered through the Total Revenue for that new Covered Pipeline would be the non capital costs already taken into account under the Draft Decision. GGT would therefore be able to recover twice the capital and non capital costs of developing the Expansions of Capacity.

108. Alternatively, if the Code could (which GGT submits is not the case) be interpreted to recognise that the capital and non capital costs of the Expanded Capacity were already being recognised in determining Total Revenue and Reference Tariffs for the original Covered Pipeline, this would presumably mean that the Total Revenue for the Covered Pipeline comprising the Expansions of Capacity would be zero. In this case, Users would be entitled to access to the Additional Services free of charge.

109. Alternatively, the Authority's conclusion that the Additional Services are Services provided by means of the original Covered Pipeline would, presumably, mean that there would be no services to be provided by means of the new Covered Pipeline. On this basis, the Authority's approach would mean that, presumably, the Expansions of Capacity would never satisfy the test for coverage. The result of this is that Users would never have a right of access to the Additional Services (given that the Authority has recognised that Users do not have a right of access to the Additional Services, as discussed above).

110. Neither of these consequences is sensible and cannot be regarded as having been intended by the drafters of the Code. However, they are foreseeable consequences of the conclusions in the Draft Decision.

2.2.11 Failure to give effect to approved Access Arrangement

111. Under the approved Extensions and Expansions Policy, and consistent with Section 3.16 of the Code, expanded capacity is either:

(a) part of the Covered Pipeline and the terms of access are determined under the Access Arrangement for the Covered Pipeline; or

(b) part of the Covered Pipeline but with the terms of access determined under a separate Access Arrangement; or

(c) not Covered.

112. However, the Draft Decision creates a fourth category – the Expansions of Capacity are not Covered but are part of the Access Arrangement. There is nothing in the Code or the approved Access Arrangement to support the creation of such a new category.

2.2.12 Incorrect conclusion in relation to consistency with Reference Tariff Principles

113. The Reference Tariff Principles offer no support for the Authority's conclusions described in paragraphs 34(b), (c) and (d). The provisions of the Code previously discussed must be construed according to the clear meaning of the words used, taking into account the whole of the context in which they appear. Quite clearly the Code envisages that a Service Provider will have the possibility of electing to treat expansions of capacity as not forming part of a Covered Pipeline with the consequence that the value of the capital assets enabling the expansion will not form part of the Capital Base of the Covered Pipeline. The words of the various provisions of the Code consistently reflect this approach. The Reference Tariff Principles cannot change what is otherwise the clear meaning and intent of the provisions of the Code. The Principles are intended to guide service providers and the Regulator in the design of Reference Tariffs and Reference Tariff Policies where choices are available. They have little or no bearing on the interpretation of other provisions of the Code.

114. However, even if the Authority does have a discretion in this matter, which GGT submits is not the case, the Reference Tariff Principles do not support the conclusions in the Draft Decision.

115. The Draft Decision expresses a concern that the exclusion of the Expansion Assets from the Capital Base "could result in pricing distortions". This is because the shared costs of both Reference Services and Expansions of Capacity would be allocated solely to the Reference Service" (Ref. Draft Decision paragraph 189). Further, excluding throughput of the Expansions of Capacity from calculation of the Reference Tariffs would result in Users of the Reference Tariffs subsidising the Users of the Expansions of Capacity (Ref. Draft Decision paragraph 190).

116. The only express reference to "distortions" in the Reference Tariff Principles is the objective of "not distorting investment decisions in Pipeline transportation systems or in upstream and downstream industries" (Section 8.2(b) of the Code). GGT submits that the conclusions in the Draft Decision have the potential to significantly distort future investment decisions, as they have the effect of undoing the commercial basis on which significant capital investments were made.

117. The Reference Tariff Principles require that Reference Tariffs and the Reference Tariff Policy be designed with a view to achieving efficiency in the level and structure of the Reference Tariff. GGT submits that efficiency is not achieved when tariffs for Users of the Covered Pipeline are set to recover the costs of services to which those Users do not have access.

118. To the extent that the Authority relied on the possibility of "subsidy" as referred to in paragraph 190 of the Draft Decision, the Draft Decision proceeded on an incomplete and erroneous assumption. There is no evidence that the Authority has considered whether or not Users of the Reference Tariff do, in fact, "subsidise" Users of the Expansions of Capacity. It seems to have accepted (without any evidence) that this is the case.

2.2.13 Failure to recognise GGT's legitimate business interests

119. For the reasons given in this submission, if the provisions of the Code are correctly interpreted and applied, there is no scope for the exercise of discretion by the Regulator. If, however, there were to be some scope for the exercise of discretion, a number of points should be considered. In the MAPS decision[7], the Competition Tribunal held that when considering the Service Provider's legitimate business interests under Section 2.24 of the Code, the Regulator had to take into account that the inclusion of expanded capacity would have the effect of reducing tariffs because the increase in capacity was greater than the increase in costs[8].

120. There is no evidence in the Draft Decision that the Authority has either recognised this impact or given it any weight. In contrast, there are several references to the impact on Users of GGT's election that the Expansions of Capacity are not Covered[9].

121. If all other amendments in the Draft Decision were accepted by GGT, the impact of incorrect requirement to include the costs of the Expansions of Capacity in the calculation of Total Revenue and derivation of Reference Tariffs is $4.7m per annum. Over the Access Arrangement Period, it is $23.8m.

122. In making the capital investment in the Expansions of Capacity, GGT legitimately expected:

(a) that it would continue to receive the revenues payable under the foundation contracts for the Expansions of Capacity; and

(b) that Reference Tariffs for the Covered Pipeline would be established on the basis of the costs and volumes of the Covered Pipeline.

123. The effect of the Draft Decision is to transfer away from GGT, and to Users of the Covered Pipeline, the benefits which accrue to GGT under the foundation contracts, notwithstanding that recovery of those benefits underpinned GGT's decision to invest.

124. To the extent that the Draft Decision reflects consideration of the possibility that "returns from the uncovered capacity are not reflected in the Rate of Return"[10], GGT submits that this is an irrelevant consideration. The regulator's task in assessing an Access Arrangement is to approve a Total Revenue for the Covered Pipeline, including application of the approved Rate of Return to the Capital Base. It is not relevant in that exercise that the service provider may or may not be earning returns on assets which do not form part of the Covered Pipeline.

125. Accordingly, the Draft Decision is erroneous and unreasonable as it fails to consider GGT's legitimate business interests.

2.2.14 Decision is otherwise unreasonable

126. The Draft Decision fails to recognise the basis on which GGT made significant capital investments in the Expansions of Capacity. Those decisions to invest were made in reliance on the terms of the existing approved Access Arrangement, which gave GGT

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[7] Re Epic Energy South Australia Pty Limited [2003] ACompT 5 (10 December 2003

[8] *Re Epic Energy,* Paragraphs 45, 118, 119, 120

[9] Draft Decision Paragraphs 177, 189, 190, 191, 196

[10] BHPB Submission dated 30 June 2009, cited at paragraph 171

the right to elect that the Expansions of Capacity would not be Covered. Absent a successful application for Coverage under Section 1 of the Code, GGT's election under Section 10.2 meant that the Expansions of Capacity would not be Covered and that the costs and volumes associated with the Expansions of Capacity would not be part of any Access Arrangement. However, the effect of the Draft Decision is to de facto apply the consequences of Coverage to the Expansions of Capacity. This is unreasonable.

127. In addition to the express language of the Code, part of the regulatory environment at the time of investment was the fact that the Authority had recognised when considering the initial Access Arrangement for the GGP that the regulator was not the body to make coverage decisions. To the extent that the Authority has discretion in the treatment of the Expansions of Capacity and the Expansion Assets, which GGT submits is not the case, GGT submits it is unreasonable for the Authority to effect such a significant change in the manner of exercise of its discretion.

128. The Draft Decision has not properly considered the consequence on Users of its approach:

(a) The submissions by Users are presumably based on the assumption that Reference Tariffs will be reduced as a result of including the costs and volumes of the Expansions of Capacity in the calculation of Total Revenue. GGT submits that it is difficult to conclude that Users would have otherwise argued for this approach.

(b) The submissions and the Draft Decision fail to recognise that in some circumstances, depending on the timing or manner of undertaking expansions of capacity, the effect of expansions of capacity may be to increase Reference Tariffs above what they otherwise would have been.

(c) The economies of scale achieved through early compression are typically not available through the later stages of expansion, whether that be by means of subsequent compression or looping. Accordingly, while the volumes of such later expansions would be included in the derivation of Reference Tariffs, the overall impact of including the costs of such later expansions in the calculation of the Total Revenue could well be that the Reference Tariff would be higher than it would have been had the costs and volumes of the expansion not been included.

(d) To the extent that the Authority failed to recognise this, the Draft Decision is flawed and/or unreasonable.

2.3 Conclusion

129. The Authority has misinterpreted the Code in arriving at Amendment 3. As a result the Draft Decision is incorrect and involves the Authority acting in excess of its jurisdiction under the Code. Further, it is unreasonable in all the circumstances.

2.4 Consequential amendments

130. In this submission, GGT has focused its comments on two key issues:

- The inclusion of the uncovered capacity in calculating the capacity of the Covered Pipeline, the value of the Capital Base, Forecast Capital Expenditure, the return on the Capital Base, Working Capital, Depreciation, Non capital costs, volumes and ultimately the Reference Tariff

- The use of quarterly versus annual modelling in GGT's calculation of the Total Revenue and Tariffs.

131. Neither of these matters is the subject of an Amendment in itself. However, these two issues form the foundation for the lion's share of the required amendments, notably:

Amendment 3	GGP Capital Base - Table 2 and Table 3 of the Access Arrangement Information
Amendment 4	GGP Capital Base and Depreciation - Table 2 of the Access Arrangement Information
Amendment 5	Forecast Capital expenditure - Table 4 of the Access Arrangement Information
Amendment 6	Working Capital - Table 7 of the Access Arrangement Information
Amendment 7	Depreciation - Table 6 of the Access Arrangement Information
Amendment 10	Non Capital Costs - Table 10 of the Access Arrangement Information
Amendment 11	Total Revenue - Table 1 and Table 14 of the Access Arrangement Information should be amended to reflect the values in Table 22 of this Draft Decision.
Amendment 12	Volume forecasts in TJ/day - Table 12 of the Access Arrangement Information
Amendment 13	Annual Reference Service Revenue - Table 15 of the Access Arrangement Information
Amendment 14	Reference Service Revenue - Page 13 of the Access Arrangement Information
Amendment 15	Reference Tariff charges - Clause 1 of the Fourth Schedule to Appendix 3
Amendment 16	Forecast annual revenue to be recovered from providing the Reference Service - Table 15 in the Access Arrangement Information

132. In each of these cases, the Draft Decision has couched its Amendment in terms of a requirement to delete values provided by GGT and replaced them with values in the Draft Decision. These amendments do not refer to the underlying cause of the required change.

133. GGT considers that a discussion of these amendments cannot reasonably be undertaken with an isolated view of the particular amendment at hand. Rather, GGT has taken the approach that these amendments, as a group, are addressed by the discussions on coverage and quarterly modelling in this submission.

134. Some of these amendments are further discussed in the section related to the relevant subject matter. For example, Non capital costs are discussed further in section 3. This

structure has been employed where there are further amendments, such as updates to forecasts, that do not relate to the coverage or quarterly modelling issues.

3 Capital Expenditure

Amendment 3

135. In relation to the GGP Capital Base Table 2 and Table 3 of the Access Arrangement Information should be amended to reflect the values in Table 2 and Table 4 of this Draft Decision respectively.

GGT Response:

136. For the reasons expressed in section 2 above, GGT does not accept that the GGP Capital Base in Table 2 and Table 3 of the Access Arrangement Information be amended to reflect the values in Table 2 and Table 4 of the Authority's Draft Decision.

137. The changes in the value of the asset base from 2000 to 2009 was shown in Table 2 of GGT's Access Arrangement Information submitted in March 2009 and is repeated below. It should be noted that the forecast capital expenditure for 2009 was based on GGT's December 2008 forecast.

Table 3-1: GGP Capital Base roll forward 2000- 2009 ($m, nominal)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Opening asset value	513.7	507.3	505.8	495.5	496.1	490.3	480.0	470.5	460.3	450.4
Capital expenditure	3.6	8.4	1.1	10.1	6.1	1.4	2.1	1.8	1.7	7.1
Change in working capital	0.3	0.7	-0.7	1.4	-0.7	-0.2	0.0	-0.2	0.5	0.3
Depreciation	10.4	10.6	10.8	10.9	11.2	11.4	11.6	11.9	12.1	11.6
Closing asset value	507.3	505.8	495.5	496.1	490.3	480.0	470.5	460.3	450.4	446.2

138. At the time that GGT submitted its Proposed Revisions to Access Arrangement in March 2009, the GGTJV were still carrying out its budgetary process for the 2009/10 financial year.

139. In April to May 2009 when the GGT budget for 2009/10 financial year was being set the Global Financial Crisis was at its peak. As a result APA Group access to capital markets was limited and this was reflected in the APA Group capital expenditure budget. Thus capital expenditure budgets were restricted across APA. Senior APA Group Operational Management then prioritised the proposed capital projects in order to maximise utilisation of available budgeted capital funding.

140. As a result, certain GGT 2009 projects needed to be deferred to 2010/11 and 2011/12 - this included the remote accommodation at Wiluna and Paraburdoo compressor stations and the Yarraloola and Ilgarari compressor work.

141. This has resulted in a reduction of GGT's forecast capital expenditure in 2009 from the December 2008 forecast of $7.1 million to the current forecast of $3.6 million based on the approved GGTJV 2009/10 Budget. This reduction is mainly comprised of:

- deferral of remote accommodation at Wiluna and Paraburdoo compressor stations at a cost of $2.5 million;
- deferral of Yarraloola and Ilgarari compressor work at a cost of $0.8 million; and

- GGP Satellite Communications Upgrade of $0.3 million due to a reduced scope of works.

142. Based on the revised forecast capital expenditure for 2009, Table 3-2 shows the revised GGP Capital Base roll forward for 2000 to 2009 that will be incorporated into GGT's revised Access Arrangement Information to be submitted at a later date. It should be noted that the forecast capital expenditure for 2009 in Table 3-2 below includes audited actuals to 30 June 2009.

Table 3-2: Revised GGP Capital Base roll forward 2000- 2009 ($m, nominal)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Opening asset value	513.7	507.3	505.8	495.5	496.1	490.3	480.0	470.5	460.3	450.4
Capital expenditure	3.6	8.4	1.1	10.1	6.1	1.4	2.1	1.8	1.7	3.5
Change in working capital	0.3	0.7	-0.7	1.4	-0.7	-0.2	0.0	-0.2	0.5	0.2
Depreciation	10.4	10.6	10.8	10.9	11.2	11.4	11.6	11.9	12.1	11.6
Closing asset value	507.3	505.8	495.5	496.1	490.3	480.0	470.5	460.3	450.4	442.4

Amendment 5

143. In relation to the Forecast Capital expenditure Tables 4 of the Access Arrangement Information should be amended to reflect the values in Tables 8 of this Draft Decision.

GGT Response:

144. For the reasons expressed in section 2 above, GGT does not accept that the forecast capital expenditure in Table 2 of the Access Arrangement Information be amended to reflect the values in Table 8 of the Authority's Draft Decision.

145. The forecast capital expenditure for the Access Arrangement period as shown in Table 4 of GGT's Access Arrangement Information submitted in March 2009 was as follows:

Table 3-3: Forecast Capital Expenditure ($m, nominal)

	2010	2011	2012	2013	2014
Pipeline and laterals	0.0	0.0	0.0	0.0	0.0
Mainline valve and scraper stations	0.0	0.0	0.0	0.0	0.0
Compressor stations	4.0	1.8	0.8	0.9	0.9
Receipt and delivery point facilities	0.1	0.1	0.1	0.1	0.1
SCADA and communications	0.5	1.9	1.9	0.5	0.5
Cathodic protection	0.1	0.0	0.0	0.0	0.0
Maintenance bases and depots	0.0	0.0	0.0	0.0	0.0
Remote Accommodation	0.0	0.0	0.0	0.0	0.0
Other assets	2.3	1.4	0.8	1.2	0.6
Total	7.0	5.2	3.7	2.7	2.1

146. As mentioned in GGT's April 2009 Supporting Submission, the capital expenditure for the Access Arrangement Period of 2010 – 2014 was based on forecasts as at December 2008[11] and GGT indicated that these forecasts could be changed when the full scope of projects were finalised.

147. At the time that GGT submitted its Proposed Revisions to Access Arrangement in March 2009, the GGTJV had not yet finalised its budget for the 2009/10 financial year.

148. In April to May 2009 when the GGT budget for 2009/10 financial year was being set the Global Financial Crisis was at its peak. As a result APA Group access to capital markets was limited and this was reflected in the APA Group capital expenditure budget. Thus capital expenditure budgets were restricted across APA. Senior APA Group Operational Management then prioritised the proposed capital projects in order to maximise utilisation of available budgeted capital funding.

149. As a result certain 2009 projects needed to be deferred to 2010/11 and 2011/12 - this included the remote accommodation at Wiluna and Paraburdoo compressor stations and the Yarraloola and Ilgarari compressor work.

150. In its April 2009 Supporting Submission (pages 87-88) GGT also indicated that at that time it was planning to implement a currently gas contract management and invoicing system. The project has now been fully scoped and cost estimates have been finalised. These estimates differ considerably to the estimates previously submitted. The following discussion outlines the reasons for this cost increase.

[11] GGT Public Submission Supporting Information for RAA 21 April 2009, page 73

3.1 Revised capital expenditure for the gas contract management and invoicing system

3.2 Background

151. In its April 2009 Supporting Submission (pages 87-88) GGT indicated that at that time it was planning to implement a gas contract management and invoicing system.

152. The total capital cost of this system was estimated at $2.5 million, and the cost allocated to the Covered portion of the GGP was $0.4 million.

153. GGT indicated that the system was in the process of being scoped and that the capital expenditure estimate may change as the scope of the project is finalised.

154. The Draft Decision largely accepted the GGT's Forecast Capital Expenditure, including the capital for the gas contract management and invoicing system.

Updated Capital Costing

155. As outlined in the April 2009 submission APA is seeking to implement a system to manage contracts and market data and in particular manage capacity rights, nominations, allocations, invoicing and corresponding postings to ledgers, accounts receivable and accounts payable.

156. Current systems are very limited and result in operational inefficiencies, increased risks and exposure to single points of failure.

157. This system will allow for a move away from inconsistent business processes that lead to operational inefficiencies such as a reliance on manual, disparate and uncontrolled Excel spreadsheets to undertake critical functions. Current systems raise concerns relating to security, system integrity and contract compliance.

158. The GGP is explicitly included in the scope for the proposed system.

159. As outlined in the April 2009 Supporting Submission at the time APA had not fully scoped the project or finalised capital expenditure estimates. The project has now been scoped and cost estimates have been finalised. These estimates differ considerably to the estimates previously submitted.

160. Prior to selecting a system supplier APA conducted an extensive process where ten vendors submitted written submissions addressing the business requirements and five vendors then provided system demonstrations.

161. A "do nothing" option was explicitly considered but it was rejected as continuing to operate with spreadsheets could not meet either short term or longer term requirements.

162. Only one vendor that could demonstrate that they could meet APA's overall requirements, this vendor was the vendor chosen.

163. The final capital cost for the project is $12.915 million which can be broken down as follows

- "[Information Confidential]"
- "[Information Confidential]"
- "[Information Confidential]"

164. This project and the attendant cost have been endorsed by senior APA management, and will be sent to APA Board for final approval early in 2010.

165. These costs will be spread over 2010 and 2011.

166. Allocating this total cost to the GGP using the same allocator as used in the April 2009 Supporting Submission, as accepted in the Draft Decision, gives the GGT capital cost for the project at $2.325 million, split across 2010 and 2011 as follows:

- 2010 – $1.162 million
- 2011 – $1.163 million

167. This is a $1.9 million increase compared to the amount incorporated in the March 2009 Access Arrangement Information.

168. Given the Draft Decision approved the capital expenditure and following a competitive process a final vendor has been selected, the forecast capital expenditure should be adjusted to reflect the efficient capital cost of the project arrived at via a competitive process.

169. GGT submits that this expenditure is necessary to maintain the safety, integrity or Contracted Capacity of Services as envisioned in Section 8.16(a)(ii)(C) of the Code. The sharing of this cost among other pipelines demonstrates that the cost will not exceed the amount that would be invested by a prudent Service Provider acting efficiently, in accordance with accepted good industry practice.

Future Benefits from Capital Expenditure

170. Future benefits from the capital expenditure are expected to be realized from 2011-12 onwards.

171. Benefits arising include:

- reduced operational and commercial risks associated with the extensive use of excel spreadsheets; and
- possible reduction of labour headcount.

172. The total of the benefits above is expected to be $550,000 per annum of which the GGP would benefit by $100,000. Consistent with the approach to efficiency gains used in the AER Victorian PTS Final Decision[12]. GGT believes GGT should retain the full benefit of the benefits of the efficiency gains for the Access Arrangement period and then return them to Users in later Access Arrangement periods. This approach has the benefit of removing forecasting uncertainty and allowing the actual amount of these efficiencies to be passed on in later periods when the actual amount is known.

173. The effect of the deferral of forecast capital expenditure and increase in cost of the gas contract management and invoicing system results in GGT's forecast capital expenditure for the Access Arrangement Period increasing by about $5.6 million.

174. This increase is mainly comprised of:

[12] AER, 2008, Revised Access Arrangement by Gasnet (Operations) Pty Ltd for the Principal Transmission System, April 2008 pp73-90.

- remote accommodation at Wiluna and Paraburdoo compressor stations of $2.6 million;
- Yarraloola and Ilgarari compressor work of $1.0 million; and
- gas contract management and invoicing system of $1.9 million.

175. Table 3-4 shows the revised forecast capital expenditure that will be incorporated into GGT's revised Access Arrangement Information to be submitted at a later date.

Table 3-4: Revised Forecast Capital Expenditure ($m, nominal)

	2010	2011	2012	2013	2014
Pipeline and laterals	0.0	0.0	0.0	0.0	0.0
Mainline valve and scraper stations	0.1	0.0	0.0	0.0	0.0
Compressor stations	3.4	3.4	0.8	0.9	0.9
Receipt and delivery point facilities	0.1	0.1	0.1	0.1	0.1
SCADA and communications	0.4	1.9	1.9	0.5	0.5
Cathodic protection	0.1	0.0	0.0	0.0	0.0
Maintenance bases and depots	0.0	0.0	0.0	0.0	0.0
Remote Accommodation	1.3	1.3	0.0	0.0	0.0
Other assets	3.4	2.3	0.8	1.2	0.6
Total	8.7	9.1	3.7	2.7	2.2

4 Non Capital Costs

Amendment 10

> *In relation to Non Capital Costs, Table 10 of the Access Arrangement Information should be amended to reflect the values in Table 19 of this Draft Decision respectively.*

GGT Response:

176. For the reasons expressed in section 2 above and in this section, GGT does not accept that the Non Capital Costs in Table 10 of the Access Arrangement Information be amended to reflect the values in Table 19 of the Authority's Draft Decision.

177. For the Covered Pipeline, Forecast Non Capital Costs were shown in Table 10 of GGT's Access Arrangement Information submitted in March 2009 and are repeated below. It should be noted that the forecast Non Capital Costs were based on GGT's December 2008 forecast[13].

Table 4-1: Non Capital Costs ($m, nominal)

	2010	2011	2012	2013	2014
Operating & Maintenance and Administration & General	20.1	20.3	21.2	24.8	26.7
Corporate Overheads	6.3	6.4	6.5	6.5	6.5
Asymmetric Risk	0.5	0.5	0.5	0.5	0.6
Total	26.8	27.2	28.2	31.9	33.7

178. The following sections 4.1 to 4.5 discuss matters concerning Non Capital Costs. Section 4.6 provides a summary of this section 4 and GGT's revised Non Capital Costs.

4.1 Operating & Maintenance and Administration & General

179. As at December 2008, GGT had scheduled to undertake an intelligent pigging program in 2013 and 2014[14], as per discussions with the Department of Mines and Petroleum ("DMP"). However, as at December 2009, ongoing discussions with DMP (i.e., the WA Technical Regulator) during 2009 have not been able to gain full acceptance from the DMP for the deferral of the intelligent pigging to 2013 and 2014. Therefore, acting as a reasonable and prudent pipeline operator, GGT has brought forward the cost of this program to 2010 in the GGTJV 2009/10 Budget, as per its statutory obligations.

180. Required information is being currently collated to develop a presentation to the DMP supporting the current integrity of the GGP (PL24) and presenting GGT's

[13] GGT Public Submission Supporting Information for RAA 21 April 2009, Section 5.2, page 27

[14] Ibid.,

recommendation with respect to the requirements of the next intelligent pigging program. This will then allow GGT to confirm the next intelligent pigging program for PL 24. It is expected that a presentation to the DMP will occur in the first quarter of 2010. However, GGT has retained the cost of the intelligent pigging within the 2010 Calendar Year.

181. The revised Operating & Maintenance and Administration & General Costs for the period 2010 to 2014 are shown in Table 4-10 section 4.6

4.2 Corporate Costs

182. As outlined above Amendment 10 of the Draft Decision seeks that in relation to Non Capital Costs, Table 10 of the Access Arrangement Information should be amended to reflect the values of Table 19 of the Draft Decision.

183. One of the main components of these Non Capital Costs are corporate costs. GGT is not prepared to amend the corporate cost component of the Non Capital Costs to reflect the values in Table 19 of the Authority's Draft Decision. However GGT will amend these costs to reflect updated cost information and allocation information.

184. This section outlines the history behind GGT corporate cost allocation, the reasoning behind the current corporate cost allocation and supports a revised corporate cost amount, which is less than the amount submitted by GGT in March and April 2009.

History of Corporate Cost Derivation on the GGT

185. 2005 Authority Decision relating to Corporate Costs

186. In the GGP Access Arrangement 2005 Final Decision (paragraph 359) the Authority accepted that corporate overhead costs incurred by a separate business from the Service Provider may be included in non capital costs where those costs relate to functions and activities that are necessary for the provision of pipeline services.

187. In the case of the GGP, the 2005 Final Decision (paragraph 360) accepted that there would be a range of activities undertaken by the joint venture participants, that are necessary for the provision of services and that these activities could include the costs of corporate governance and administration.

188. In the 2005 Final Decision (paragraph 361) the Authority considered that the use of an allocation methodology based on capital values to allocate estimate corporate overhead costs was appropriate. This allocation methodology was proposed by GGT.

Corporate Cost Allocation Developments 2005-2009

189. The GGP is majority owned by the APA Group. Since the 2005 Final Decision the APA Group has moved away from capital based allocation methodology, as previously used for the GGP for the following reasons:

(a) APA's corporate accounts and budgets and regulatory accounts use a revenue based allocator. APA believes that aligning corporate cost allocators and regulatory cost allocators minimises the possibility of either over counting or under counting corporate costs.

(b) APA essentially exists to earn revenue and profit for its owners. As such revenue is a reasonable proxy for assessing the amount of focus and assistance that an individual asset will receive from corporate functions and as such it is a reasonable proxy for assessing the level of corporate costs to be allocated to an asset or business unit.

(c) The use of capital values to allocate corporate costs is problematic as capital value is not an ideal indicator of the level of corporate support received. For example a fully depreciated asset, or an activity with little associated capital value, may require large amounts of corporate support but would receive a relatively low allocation of corporate overhead if the allocator is based on capital value.

(d) Consistent with the concern outlined above, the ACCC and AER have previously approved

- APA corporate costs submitted in Access Arrangement review processes which use this revenue based allocation approach; and
- APA corporate cost allocation manuals which use this revenue based allocation approach.

(e) GGT is concerned that if different jurisdictional regulators use different corporate cost allocation methodologies in assessing and allocating corporate costs this will have the potential to lead to either a systematic under-recovery or over-recovery of corporate costs. GGT believes that regulators will also be concerned about such an outcome.

(f) Not all APA assets have regulated capital bases or otherwise well defined capital bases, and as such using a capital value based allocation methodology would disproportionately allocate costs to regulated assets or assets with well defined capital bases

190. This shift towards a revenue based cost allocation is noted in the Auditor's Review Report[15] which states that allocations to 2003 were based on asset values and this was the basis for the information provided for the previous GGP Access arrangement, but from 1 July 2005 allocations have been based on revenue.

GGT April 2009 Submission

191. In the GGT confidential submission of 7 April 2009, GGT outlined that there was a substantial variation between the forecast corporate costs submitted in 2005 and GGT's actual audited corporate costs for the period 2005 to 2008.

192. The GGT confidential submission examined and explained the discrepancies between the 2005 corporate cost forecasts and the corporate costs actually incurred from 2005 to 2008 (and the December 2008 forecasts for 2009 calendar year).

193. The GGT April Public Submission[16] supporting the proposed revisions to the Access Arrangement noted that the then current corporate costs forecasts for 2010 - 2014 were based on 2008-9 budgets which had been allocated in accordance with current APA practice, after allowing for some adjustments for costs that related to activities irrelevant to the GGP. These costs were then projected forward with adjustments made for known future cost variations.

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[15] Deloitte Touche Tohmatsu Independent Auditor's Review Report to Directors of Goldfields Gas Transmission Pty Ltd and Economic Regulation Authority dated 21 September 2009, page 6

[16] Goldfields Gas Pipeline (2009) Supporting Information to Proposed Revisions to Access Arrangement Submitted to Economic Regulation Authority 23 March 2009 Public Submission 21 April 2009 page 136

194. The corporate costs put forward later in this section 4.2 will revise these forecasts based on 2009-10 budgets, which have been finalised since the GGT April submission.

Authority October 2009 Draft Decision

195. The Draft Decision (paragraph 645) requires the values in Table 10 of the Access Arrangement Information, which include corporate costs to be adjusted. The adjustment required for corporate costs, including superannuation, is as shown below in Table 4-2:

Table 4-2: Corporate Costs as Submitted by GGT and Allowed by the Authority in the Draft Decision ($m)

	2010	2011	2012	2013	2014
Corporate costs in GGT Submission	6.3	6.4	6.5	6.5	6.5
Corporate Costs in Draft Decision	2.4	2.4	2.5	2.5	2.6

196. The Draft Decision (paragraph 646) indicates that the Draft Decision values are largely derived from the 2005 Access Arrangement corporate overheads plus an allowance for inflation.

197. The Draft Decision has largely rejected GGT's submission on corporate costs for the following reasons:

- the revenue based allocation of corporate costs differs from the capital based methodology used in 2005 and there is insufficient information to support the change in methodology or to demonstrate that the revenue approach is appropriate (refer to submission paragraphs 214 to 230); and
- the full range of corporate overhead costs are not necessarily costs that meet the prudent Service Provider test (refer to submission paragraphs 231 to 241).

198. In its April submission the GGT adjusted corporate overheads to take account of the fact that not all of the GGP is a Covered Pipeline. The Draft Decision (paragraphs 134 to 199) does not accept this approach, and consequently the Draft Decision requires an adjustment be made to the GGT's corporate costs to take account of the Draft Decision's position on coverage. Thus, under the Draft Decision the GGT corporate costs should include all of the corporate costs allocated to the GGP, not just those corporate costs allocated to the Covered portion of the GGP. As outlined in this submission in section 2, GGT does not accept the Authority's position on this matter of coverage, and consequently GGT has not adjusted the corporate costs to take account of coverage. The revised corporate costs in this submission have been allocated between the Covered and uncovered portion of the GGP in a manner consistent with the coverage allocation in the previous submission.

199. Finally, the Draft Decision (paragraph 632) notes that GGT's actual corporate overhead costs for the current Access Arrangement Period were not available in sufficient time for the Draft Decision. GGT provided the Auditor's Review Report on 21 September 2009 and believes this now addresses the Authority's concern.

4.2.1 GGT Response to Draft Decision

Reconciliation of 2005 forecast corporate costs and 2005 - 2009 actual corporate costs

200. The 2005 corporate cost forecasts were based on 2001 to 2004 actual costs allocated on the basis of GGT book value to the total book value for all APA assets.

201. Table 4-3 below shows that there is a substantial variation between the forecast Corporate Costs submitted in 2005 and GGT's actual audited corporate costs for the period 2005 to 2008. The forecasts have understated actuals for the period 2005 to 2008 by between 64.8% (in 2005) to 146.0% (in 2008).

Table 4-3 Variation between Corporate Costs forecast in 2005 and actual audited Corporate Costs for the period 2005 to 2008 ($m)

	2005	2006	2007	2008	2009
Forecast	1.987	2.037	2.088	2.140	2.194
Actual	"[Information Confidential]"				
% increase	"[Information Confidential]"				

202. On 24 November 2009, the Authority requested an explanation from GGT of how the volume information submitted on 7 July 2005 was different to the volume information that GGT had supplied on 5 June 2005 in response to a notice under Section 41, of Schedule 1 of the Gas Pipelines Access (Western Australia) Act 1998 (Section 41 Notice).

203. In reviewing the information supplied in July 2005 and in June 2009, GGT has uncovered two errors in the MDQ information that it supplied to the Authority under a Section 41 Notice, as a result of uncovering historical correspondence that was not available at the time of this submission plus spreadsheet error. GGT will be providing in separate correspondence explanatory details of these errors to the Authority and with an accompanying amended response to the Section 41 Notice.

204. The impact of these two errors is that costs such as the APA Commercial Management Fee[17] (incorporated in Operating & Maintenance and Administration & General costs - refer to section 4.1) and Corporate Overheads[18], which are allocated to the Covered Pipeline based on an MDQ derived factor will change from what GGT had previously submitted in Table 10 of Access Arrangement Information submitted in March 2009 and in Table 4-3 above. The corrected corporate costs is shown in Table 4-4 below:

[17] GGT Public Submission Supporting Information for RAA 21 April 2009, pages 109 and 131

[18] Public Submission Supporting Information for RAA 21 April 2009, pages 114 and 139

Table 4-4 Variation between Corporate Costs forecast in 2005 and revised actual Corporate Costs for the period 2005 to 2008 ($m)

	2005	2006	2007	2008	2009
Forecast	1.987	2.037	2.088	2.140	2.194
Revised Actual	"[Information Confidential]"				
% increase	"[Information Confidential]"				

205. The forecast for corporate costs in the year 2005 itself underestimated costs by approximately 71% indicating that there was an initial systemic forecasting problem creating an underestimation of corporate costs from the first year of the forecasts.

206. The forecasts did not capture all future corporate costs. This is due to several factors including:

(a) Forecasting errors at the time the forecast were made. This is borne out in the fact that the 2005 forecast underestimates costs by 70.7%.

- In particular it seems that the methodology used in the 2005 regulatory forecasts did not reflect the methodology used to allocate APA costs in its general accounts, which is the number reflected in the actual figure.

(b) The regulatory forecasts in 2005 are based on historic averages for 2001-2004 of:

- labour costs of 14 APA staff allocated on either a capital value allocation basis or an activity basis; and
- overheads allocated on a capital value allocation basis.

(c) However since at least 1 July 2005 APA has been allocating corporate costs on a revenue basis. Allowing for this adjustment partially explains discrepancies in the 2005 forecast.

(d) Incorrect forecasting assumptions - The forecasts were based on the assumption that APA's corporate and operating structure would remain as it was in 2005. This assumption was incorrect.

(e) Changes in the functions reflected in corporate costs - At the time of the 2005 forecasts the APA Group was a small company which had many functions outsourced. For example in 2005 functions such as IT, asset management, operations, accounting and some treasury and regulatory functions were outsourced.

(f) Due to ownership changes APA took on more corporate functions, such that all functions are now undertaken by APA.

(g) As a means of measuring this point, the corporate costs in 2005 were effectively based on the services functions provided by approximately 15 staff. APA corporate costs now cover the services provided by approximately 60 staff.

(h) The Draft Decision (Confidential Attachment paragraph 31) indicates that GGT has not provided any information to explain or justify this increase in staff or to

explain the roles performed by those persons and consequently can therefore not be satisfied that all of those 60 persons are engaged in work delivering Services on the GGP.

(i) In the period 2005 to 2009 the APA group has expanded from revenues of $377.8 million to $949.8 million and assets of $1.9 billion to $4.7 billion[19]. It is reasonable to expect corporate additional staff to be employed to deal with the larger corporate entity APA has become. The staff performs functions related to company secretarial functions, finance functions including tax, treasury and statutory reporting, information technology functions, commercial functions, and legal functions. These are detailed in submission paragraphs 249 to 252 below.

(j) Functions performed for the GGP include, for example, lodging of statutory accounts, reporting to shareholders, holding annual general meetings, paying tax, maintaining environmental and regulatory compliance, raising capital, investor relations, recruitment, training, managing employees, risk management and insurance.

(k) Changes in the size of APA – at the time the forecasts were made in 2005 APA was a small company (for example APA had approximately 20 employees). APA is now a much larger company (for example APA now has over 1000 employees). This change in size means that;

- more functions and processes are formalised and routinely performed on a centralised basis (for example human resources was originally operated on an ad hoc basis by general management, it is now operated from a dedicated corporate function. This frees up general management time to focus on other issues);
- some functions and costs change in scope and size (for example investor relation and treasury functions have changed as APA has becomes a larger company without a single dominant shareholder).
- new functions are required to be undertaken due to APA's size (for example. IT processes are required to become formalised and consistent to ensure effective interface and communication across the broader APA Group, whereas in a smaller organisation IT was often organised by general management).

(l) Changes in the general business environment. As business, financial, statutory, compliance, regulatory, information technology and operating environments become more complex costs have increased. This increasing complexity was most likely not factored into the 2005 forecasts, particularly as they were based on costs referenced back to 2001. Examples of this include reporting requirements under NGERS, increased financial reporting requirements, increased regulatory oversight increased requirements for IT interconnectivity and compatibility by suppliers, shippers and end users.

207. Given the above factors GGT believes the 2005 corporate costs forecasts do not form a strong basis for 2010-2015 corporate cost forecasts.

[19] See Australian Pipeline Trust Annual Report 2005 pp31-32 and APA Group Annual Report 2009 pp-51-52

208. GGT has significant concerns that the Draft Decision is proposing forecast corporate costs for 2010 to 2015 by extrapolating from the 2005 forecast corporate costs which in turn were extrapolated from actual costs in 2001-2004. To accurately forecast corporate costs the Draft Decision must take into account changes which have occurred between 2004 and 2009.

209. GGT believes that corporate costs incurred in 2001-2004, which underpinned the 2005 corporate cost forecasts are not a robust basis for forecasting corporate cost forecasts for the period 2010 to 2015. A prudent service provider acting efficiently would not use 2001-2004 data and 2005 forecasts to make a 2010 – 2015 cost forecast when more recent actual data is available to underpin a forecast.

210. Furthermore Section 8.2 (e) of the Code states

> *The factors about which the Relevant Regulator must be satisfied in determining to approve a Reference Tariff and Reference Tariff Policy are that: … any forecasts required in setting the Reference Tariff represent best estimates arrived at on a reasonable basis*

211. It is not reasonable to rely on costs, which are demonstrably incorrect and which were derived in 2005, to be used as the basis of a cost forecast for a 2010 – 2015 Access Arrangement. Such a forecast cannot be viewed as a forecast made on a reasonable basis when more recent information has been provided to the Authority.

212. To accurately forecast corporate costs the Draft Decision must take into account changes in corporate structure, legislation, regulations, actual costs incurred and other factors, which have occurred between 2004 and 2009.

213. In making its forecast GGT used the then most recent actual data and the then most recent budget data to establish a corporate cost forecast. In making cost forecasts prudent service providers would use recent actual and budget data, and adjust the data for any known or reasonably expected significant cost anomalies. This is the approach used by GGT.

Allocation methodology and reasons for change

214. The Code requires a reasonable allocation of shared costs, including corporate costs. In instances, such as the GGP, where the owners and operators of the pipeline also own and / or operate other assets the shared costs incurred need to be allocated between the assets in a reasonable manner

215. In 2005 the allocation methodology used was GGP book value to the total book value for all APA assets.

216. The reasons for the change in the allocation methodology are outlined in more detail below.

Consistency with APA Accounting Practice and Internal Cost Allocation Methodology

217. The allocation methodology now being put forward by the GGT is the same methodology as used internally in APA in deriving budgets and internal accounts. This has been confirmed by Deloittes, the auditor .The audit report demonstrates that corporate overheads are being recovered from the operating assets only once.

218. The APA revenue based cost allocation methodology is being used to derive regulatory accounts required by relevant national gas and electricity laws. In some instances these regulatory accounts were or are provided to regulators[20].

219. If different cost allocation methodologies have to be used on different assets in the future due to jurisdictional regulatory decisions this creates the potential for under recovery or over recovery of these corporate costs across the whole APA Group.

Consistency with Allocation Methodology accepted by the AER and ACCC for the APA Group

220. The Draft Decision (paragraph 626) indicated that no evidence had been identified that the ACCC or AER accepted such an approach this revenue based allocation approach.

221. The revenue based methodology has been accepted by the AER and ACCC in relation to both electricity and gas assets owned, wholly or partially, by the APA Group. For example the revenue based methodology was put forward by APA in the Murraylink and Directlink cost allocation manuals, which are required by regulation, when these assets were wholly owned by APA. For example the Directlink Manual[21] states

> *An annual cost allocation is undertaken for all shared costs arising from the provision of the above services by the APA Group. The allocation of these shared costs is made on the basis of revenue. As shown in Table 1, each business unit is allocated corporate overhead costs in proportion to their contribution to the APA Group's Total Revenue.*
>
> *Based on historical performance, Directlink believes revenue is an appropriate driver for allocating 'Corporate Overhead Costs' as corporate overheads are a necessary cost for the generation of revenue. Furthermore, a causal relationship exists between revenue generation and corporate overheads. Revenue is therefore considered an appropriate driver for the allocation of 'Corporate Overhead Costs' to each of the APA Group's assets. It should be noted that in previous gas infrastructure regulatory decisions relating to APA gas assets the ACCC has accepted revenue as an appropriate allocator for corporate costs.*

222. The AER approved these manuals.[22] The AER's consultant in this process noted[23] that the corporate cost allocation approach was consistent with National Electricity Rules cost allocation principles.

223. The revenue based allocation methodology is also the same corporate cost allocation methodology used by APA in regulatory decisions on such assets as the Moomba

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[20] APT Allgas, Murraylink and Directlink regulatory accounts using this allocation methodology have all been submitted to the relevant state or Commonwealth regulators in 2006, 2007 and 2008. Note that the sale of Murraylink and Directlink to EII in 2008 means that APA no longer submits these accounts, and the move to national energy regulation in 2008 means that APT Allgas regulatory accounts are no longer submitted to the Queensland Competition Authority

[21] 2008, APA group, Directlink Manual page 10.http://www.aer.gov.au/content/index.phtml/itemId/718224

[22] AER, 2008, Final Decision Electricity Transmission Network Service Providers Cost Allocation Methodologies August 2008 p10 http://www.aer.gov.au/content/index.phtml/itemId/718224

[23] 2008, McGrathNicol, Review of Cost Allocation Methodology Directlink 30 July 2008 page 11 http://www.aer.gov.au/content/index.phtml/itemId/718224

Sydney Pipeline and the Roma Brisbane Pipelines. For example the ACCC 2007 Draft Decision on the GasNet Access Arrangement states[24]:

> *The APA Group's current approach is to allocate its corporate overheads on the basis of an asset's contribution to the APA Group's Total Revenue. In relation to its proposed revisions to the AA for the Roma to Brisbane pipeline (RBP) in 2006, the APA Group allocated 14 per cent of its indirect corporate costs to the RBP on the basis that the RBP contributed 14 per cent of the APA Group's revenue (in 2005). A similar approach was adopted by the APA Group for the Moomba to Sydney pipeline (MSP).*

224. And further supports this by noting[25]

> *The APA Group's annual ring fencing reports confirm that revenue shares are used as the basis for allocating corporate overheads.*

225. The Draft Decision (paragraph 626) indicated that the Authority could not identify evidence of the ACCC or AER accepting the revenue allocation approach. GGT believes the evidence above demonstrates that the ACCC and AER have accepted this allocation approach based on revenue.

Consistency with the Code and the Legitimate Interests of Service Providers

226. The Code Section 2.24 requires that in assessing a proposed Access Arrangement, the regulator must take into account, amongst other things, the Service Provider's legitimate business interests and investment in the Covered Pipeline and the interests of Users and Prospective Users. GGT believes that ensuring that corporate costs are recovered once, but only once, is in the interests of both the Service provider and the Users. To recommend a cost allocation methodology that increases the potential for the over-recovery or under-recovery of costs is not in the interests of either the Service Provider or the Users, and as such is not consistent with the Code.

227. Furthermore the Code Section 8.1 requires that, amongst other things, a Reference Tariff should be designed with a view to providing the Service Provider with the opportunity to earn a stream of revenue that recovers the efficient costs of delivering the Reference Service and not distorting investment decisions in Pipeline transportation systems or in upstream and downstream industries.

228. To recommend a cost allocation methodology that increases the potential for the under-recovery of costs is not consistent with the recovery of efficient costs. Similarly, recommending a cost allocation methodology which differs to that used in other jurisdictions has the potential to distort investment decisions. Thus the corporate cost allocation approach recommended in the Draft Decision is not consistent with the Code. Furthermore, such an approach may create differences that have a high potential to distort investment decisions as different jurisdictions are now more or less attractive for investment.

229. Overall the APA Group seeks to consistently apply a single cost allocation methodology across all of its operating businesses and Access Arrangements. To the extent that this

[24] ACCC, 2007, Draft Decision, Revised Access Arrangement by GasNet Australia Ltd for the Principal Transmission System, p116

[25] ACCC, 2007, Draft Decision, Revised Access Arrangement by GasNet Australia Ltd for the Principal Transmission System, 2007, p116

consistent application is not permitted by state based regulators this raises the potential for either under-recovery or over-recovery of corporate costs

230. APA will continue to use a revenue based allocation internally and in submissions to the AER.

Applicability of Corporate Costs to the Pipeline

231. The Draft Decision (paragraph 629) indicates that the full range of corporate overhead costs submitted by GGT in its forecast of Non Capital Costs for the forthcoming Access Arrangement Period may not meet the prudent service provider test. That is these costs would not be incurred by a prudent service provider, acting efficiently, in accordance with accepted and good industry practice.

232. As outlined in GGT April 2009 submission (page 136) the corporate costs put forward by GGT include costs for senior management and board, company secretary functions including shareholder management and listing, finance including tax, treasury and statutory reporting, information technology, commercial, legal, regulatory, operations management including procurement, asset management and engineering.

233. Any Service Provider, including GGT needs these functions to be performed in order to meet the following activities and obligations[26];

- statutory obligations such as lodging accounts, auditing accounts, reporting to shareholders, maintaining shareholder registries, holding annual general meetings, paying tax, maintaining environmental, safety and regulatory compliance;
- general prudent capital raising activities such as managing investor relations, raising equity via ASX listing and raising debt via debt market activity;
- general prudent human resource management activities such as efficiently recruiting, retaining, training, compensating and managing employees;
- general prudent financial management activities such as operating appropriate internal cost monitoring systems and performance reporting systems and operating invoice payment systems;
- general prudent risk management activities such as insuring assets and operating appropriate internal risk management and reporting systems;
- general prudent IT management activities such as implementing, maintaining and operating company wide compatible IT systems and ensuring IT security is maintained; and
- ongoing business improvement activities. GGT believes that ongoing business improvement activity is implicit in the Code 8.37 benchmark of a prudent Service Provider, acting efficiently, in accordance with accepted and good industry practice.

234. GGT believes that all of the corporate costs outlined above are incurred by prudent service providers across the gas pipeline industry.

[26] This listing is not an exhaustive listing of the requirements and obligations which the corporate functions undertake.

235. It should be recognised that other regulators, such as the ACCC have previously approved APA general corporate costs such as corporate employee salaries, director's fees, rent, office costs, IT costs, communications costs, costs associated with stock exchange listing (eg share registry fees, annual report preparation) and other costs incurred in the operation of a listed business[27].

236. The cost to GGT would be much greater if it had to source each of these functions for its exclusive use. In order to confirm and quantify the benefits of using a centralised corporate function instead of duplicating these functions as stand alone functions for each of APA's assets APA has commissioned a report from KPMG which examines this issue and estimates the reasonable level of non capital corporate costs for an asset with the characteristics of the covered portion of the GGP.

237. This KPMG report is attached at Attachment 1. This report effectively derives a corporate cost benchmark for a prudent Service Provider, acting efficiently, in accordance with accepted and good industry practice

238. The KPMG report undertakes cost modelling of the non capital corporate costs for an asset with the characteristics of the covered GGP. This modelling identifies corporate functions that would be required by an asset with the characteristics of the covered GGP and then models costs for these corporate functions. This modelling is based on a series of empirical cost benchmarks. The cost modelling is explicitly undertaken to meet the requirements of sections 8.36 and 8.37 of the Code.

239. The KPMG report concludes that an expected range of Non Capital corporate costs (in $2009) is for an asset with the characteristics of the covered portion of the GGP is $3.95 million to $9.24 million per annum, with a midpoint of $5.85 million.[28.] GGT submits that this midpoint is close to the GGT submitted corporate cost of $6.3m for 2010 and as such the KPMG report strongly supports GGT's position that a corporate cost of $6.3m meets the requirements of Code sections 8.36 and 8.37.

240. In considering the KPMG Report the Authority should recognise that the cost categorisations used by GGT and KPMG may differ due to APA internal cost centre definitions and KPMG cost benchmarks not being aligned. However the fact that the total amount of corporate costs is similar indicates that the GGT corporate costs are reasonable costs when compared with a benchmark prudent Service Provider, acting efficiently, in accordance with accepted and good industry practice.

241. GGT submits that the full range of corporate overhead costs submitted by GGT in its forecast of Non Capital Costs for the forthcoming Access Arrangement Period meet the prudent service provider test. That is these costs would be incurred by a prudent service provider, acting efficiently, in accordance with accepted and good industry practice.

Level of Corporate Costs

242. The Draft Decision (paragraph 631) indicates some concern that notes that these costs were above GGT's previous forecasts and may continue to increase, and as such it is implied that these costs may be inefficient.

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[27] For example the ACCC approved APA corporate costs, such as those outlined above, on the Roma Brisbane Pipeline as submitted except for some relatively minor wage and legal costs.

[28] KPMG, 2009, Corporate Cost Benchmarking - Goldfields Gas Pipeline, page 1.

243. The corporate costs are from a Board approved budget. This budget is not derived for any regulatory purpose and is independent of any regulatory process. The costs in the budget are based on internal business forecasts and represent a reasonable estimate of future costs. The costs are within the market guidance provided in accordance with ASX listing rules.

244. In setting the budget costs the Board is required to act in the interests of APA shareholders; it is not in the interests of APA shareholders to have excessive costs. As such there are strong corporate governance reasons to assume these costs are prudent and efficient.

245. The incentive to reduce costs is further reinforced by APA management incentive schemes. These incentive schemes are driven by a formula, the most readily controlled component of which is costs. This provides APA management with a major incentive to ensure costs are kept at an efficient level as personal rewards are directly linked to achieving financial targets.

246. Furthermore GGT does not believe that these costs are inefficient as the operation of the Access Arrangement incentive mechanisms means that in the context of currently approved APA Access Arrangements (such as the Access Arrangements for the Victorian PTS, Allgas network, the Roma Brisbane Pipeline etc) it is in APA's interest to reduce operating costs, including corporate costs, wherever possible. APA has no incentive to increase corporate costs as to do so would increase costs to other APA regulated assets with a consequent reduction in margins. This causal nexus would not exist if different regulators used different allocation methodologies. The use of different allocation methodologies would reduce incentives to reduce corporate costs.

247. So long as the allocation methodology is consistent over time and across assets, the incentive mechanism is exerting a discipline on the amount of corporate costs incurred.

248. Furthermore, given the company-wide nature of the APA corporate costs and the asset footprint of the APA Group these costs are scrutinised, and will be scrutinised, by regulators other than the Authority. The Authority may be able to take additional comfort that these costs are being reviewed at every APA Access Arrangement reset[29].

GGT Corporate Costs

249. The Draft Decision required an amendment for the amount of corporate costs with the amended corporate costs being the corporate costs in the current Access Arrangement adjusted for inflation. GGT does not accept this amendment.

250. Based on the revenue allocation methodology outlined in the April submission and the 2009-10 budget, the revised corporate costs are described below.

251. The revised corporate costs are based on the APA Group approved 2009-10 budget, adjusted by removing costs which have no relationship with any functions provided to the GGP. This includes costs associated with;

- Insurance, which is recovered separately;
- Corporate development including any future mergers, acquisitions, divestments or similar corporate projects;

[29] APA currently has Access Arrangement on eight heavy regulation gas assets, including GGP, where such costs would be scrutinised at resets.

- IT which is attributed to a specific business unit; and
- Other commercial services attributed to a specific business unit

252. This total cost is built up from various cost categories for function corporate areas. These corporate areas for 2009-10 are as follows:

- Chief Executive Officer function
- Company Secretary function – including annual reporting, general meetings, risk management, compliance management, audit costs, directors costs and general administrative costs;
- Corporate Finance function – including, treasury, tax, budgeting, general financial accounting, general management accounting, performance reporting and financial services such general accounts payable and receivable;
- Corporate Commercial function – including investor relations and general commercial functions;
- Human Resources function – including training, health safety and environment, employee communications, payroll and recruiting;
- IT and Transformation function – including GGT specific IT costs;
- Legal and Regulatory function – note that regulatory costs are excluded from the initial allocation and allocated after the allocation for the Covered Pipeline has been made. This is consistent with approach used in the GGT March 2009 and April 2009 submissions; and
- Projects and Other – including ongoing business improvement projects

253. The functional structure of these corporate areas have changed since the 2008-9 budget was undertaken, and as such these corporate areas are not a perfect match the corporate areas previously submitted in the GGT March 2009 and April 2009 submissions.

254. The costs for these areas are projected forward by financial years to 2014-15 based on any known and reasonably expected corporate cost changes. The major change is a $1 million reduction in total Transformation costs from 2011-12 onwards as more APA IT systems become aligned.

255. Note that:

- the forecast corporate costs are in financial years as APA does its budgeting in financial years;
- the corporate costs are shown below in total (ie not allocated) and are real costs (ie not escalated);
- the corporate costs exclude IT costs and corporate operating costs which are allocated separately; and
- the corporate costs shown throughout this section are in financial years and real terms as this reflects the way in which the budgets and cost forecasts are derived. These costs are then converted into calendar year, nominal costs at the conclusion of this section.

Table 4-5: APA Forecast Total Corporate Costs, $Real 2009-10, $000s

Year	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
APA Corporate Costs	"[Information Confidential]"					

256. These costs are then allocated to the GGP via the revenue allocator and adjustments are made for:

- GGT IT costs – which are added in as a separate item
- Incorporation of minority owner costs

257. The revenue allocator used is the budgeted revenue of the APA owned share of the GGP as a percent of total APA revenue. This allocator is 20.4%. This allocator has increased from the GGT March 2009 and April 2009 submissions as the 2009-10 budget revenues reflect the fact that APA have recently sold down their interest in some revenue producing assets.

Table 4-6: GGP Forecast Total Corporate Costs including the Uncovered Pipeline, $Real 2009-10, $000s

Year	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
APA Corporate Costs allocated to the GGP	"[Information Confidential]"					
APA IT costs allocated to the GGP	"[Information Confidential]"					
Minority Owner Costs	"[Information Confidential]"					
Total Corporate Costs for GGP	6,821	6,821	6,617	6,617	6,617	6,617

258. In the GGT March 2009 and April 2009 submissions several cost categories were further adjusted, to reflect an incomplete integration and utilisation of common systems. These further adjustments are no longer necessary.

259. The total corporate and owner costs for the GGP are then allocated to the Covered Pipeline. In doing this GGT has used the same approach as used in the GGT March 2009 and April 2009 submissions. Corporate regulatory costs are allocated directly to the Covered Pipeline and are incorporated in Operations & Maintenance and Administration & General costs (refer to section 4.1).

260. Prior to finalising the total corporate costs an additional cost relating to superannuation is added. This is discussed in more detail in section 266.

Table 4-7: GGP Forecast Total Corporate Costs For the Covered Pipeline excluding superannuation, $Real 2009-10, $000s

Year	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Corporate and Owner Costs of regulated portion of the GGP	5,496	5,472	5,308	5,309	5,312	5,312

261. It can be seen that these corporate costs are similar to the corporate costs submitted in the covered portion of the GGP in the April 2009 Supporting Information to the Proposed Revisions to the GGP Access Arrangement in Table A4.24. This is notwithstanding the fact that these revised corporate costs are based on 2009-10 budget costs not 2008-9 budget costs, and are based on a higher revenue allocator than the previously submitted costs.

262. As such GGT believes this is demonstrates that these corporate costs are the costs incurred by a prudent Service Provider, acting efficiently, in accordance with accepted and good industry practice.

4.2.2 Conclusion

263. GGT submits that it has demonstrated that the categories and levels of corporate costs which GGT is seeking to recover are those that would be incurred by a prudent service provider. GGT does not believe that the current approach in the Draft Decision of disallowing these costs is valid as it provides no evidence that these costs do not meet the test in Section 8.37 of the Code, beyond noting the fact that the cost forecasts are greater than the forecasts in 2005.

264. GGT submits that a prudent Service Provider, acting efficiently, in accordance with accepted and good industry practice would incur these costs, and there is no substantive argument in the Draft Decision to demonstrate support for the contrary proposition.

265. Amendment 10 of the Draft Decision seeks that the Non Capital Costs in the Access Arrangement Information should be amended to reflect the values in Table 19 of this Draft Decision respectively. For the reasons outlined in section 4.2 above, GGT is not prepared to amend the corporate cost component of the Non Capital Costs to reflect the values in Table 19 of the Authority's Draft Decision.

266. At the time that GGT submitted its Proposed Revisions to Access Arrangement in March 2009, the GGT was still carrying out its budgetary process for the 2009/10 financial year, including the budgeting of corporate costs, primarily from the APA Group. The GGT 2009/10 Budget, including corporate costs from the APA Group is now finalised and these costs are used in developing the corporate cost estimates shown in Table 4-7 above.

4.3 Superannuation

267. In the revised Access Arrangement GGT proposed a non capital cost allowance for superannuation costs of $500,000 per annum. The need for an allowance for superannuation has arisen as the defined benefit superannuation schemes which are part of the broader APA employee superannuation scheme are currently being required to make increased employer contributions. The requirement to make these

contributions is due to recent share market performance arising from the global financial crisis. This requires increased payments to ensure funds can cover their liabilities.

268. There are employees working for APA on the GGT who are in a defined benefit fund.

269. Following the provision of further information by GGT in June 2009, the Authority has agreed that addressing the deficit in the defined benefit superannuation schemes by including an amount in GGP operating costs is appropriate and is allowing $0.137 million for each year of the forthcoming Access Arrangement period[30].

270. However before this amount is finally approved the Draft Decision (Confidential Attachment paragraphs 13 and 14) is seeking further information, namely:

> *The Authority notes that GGT submitted its Access arrangement on 23 March 2009, very close to the low point of financial markets. Since that time many investments in superannuation funds have recovered significantly. The Authority notes that APA, on 25 August 2009 disclosed through a release to the ASX a net liability of $14.7 million in its defined benefit superannuation schemes. This is below the amount outlined in the confidential supporting submission where GGT advised APA intended to contribute an additional $18 million to its defined benefit superannuation schemes*
>
> *The Authority therefore requires GGT to provide the Authority with an up to date assessment of actuarial adequacy to its defined benefit superannuation obligations.*

271. It should be noted that the GGT submission on superannuation was based on information received from the superannuation funds relating to the current deficits of the funds rather than actuarial reports. In particular the $18 million is modelled based on requests and recommendations to pay at certain levels. It should also be recognised that the modelling is based on assumptions related to the salary levels of those employees on defined benefits superannuation.

272. GGT has re-examined this issue and recognises that the amount in the APA Group financial statements of $14.7 million as at 30 June 2009 now represents the deficit in respect of defined benefit schemes as at that date calculated as per Australian Accounting Standard (AASB 119) requirements.

273. General superannuation industry practice is such that any deficit needs to be contributed to the defined benefit schemes within a period of three years[31]. These rules have also been adopted by the trustees of the relevant defined benefit funds[32].

274. Accordingly, GGT is amending the cost sought and the time frame over which the cost is sought.

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[30] GGT understands that the Draft Decision calculated this number by dividing $18 million by 5 years and then multiplying the resulting $3.6 million by 0.0381 (which is a ratio implicit in data previously provided to the Authority)

[31] See for an example of a discussion of the practice http:/www.apra.gov.ay/Speeches/03 17.cfm slide 8. This indicates the superannuation industry prudential regulator generally believes this practice is acceptable and appropriate.

[32] Participation agreements between the APA employing entities and the relevant super funds requires that where there is a shortfall the primary objective is to eliminate this shortfall within 3 years.

275. The amount being sought is now $0.187 million per annum for the three financial years of 20019-10 to 2011-12 for the whole of the GGP. This is derived by using the $14.7 million, as per the APA accounts dividing by three years (instead of five) and then multiplying by 0.0381[33].

276. This in turn reduces to an average of $0.130 million per annum for the first three years of the Access Arrangement period for the Covered Pipeline.

277. While the annual financial year total amount of $0.187 million is higher than the amount proposed by the Authority (i.e., $0.137 million for five years), the total amount claimed over the life of the Access Arrangement will be lower, namely the Authority are proposing recovery of $685,000 in total, but this revised proposal seeks to recover $392,000 in total.

278. It should be recognised that this revised proposal has an implicit assumption that the Defined benefit schemes will not be required to make further payments or increase current payments. The likelihood of occuring is linked to future financial market developments which in turn are linked to the global financial crisis. There is the potential for this issue to be re-visited in the next Access Arrangement process if the global financial crisis proves to be long lasting.

279. In summary, the APA group defined benefit deficit is $14.7 million, of which the Covered Pipelines share is $392,000 in nominal terms (ie as adjusted for inflation). This amount is to be claimed n the first three years of the Access Arrangement Period based on 2010 ($154,000 million), 2011 ($158,000) and 2012 ($80,000).

4.4 Corporate Costs and Superannuation Conclusion

280. The GGT proposed corporate costs including superannuation costs and allocated regulatory costs are shown in Table 4-8 below.

Table 4-8: GGP Forecast Total Corporate Costs For the Covered Pipeline including superannuation, $Real 2009-10, $000s

Year	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Corporate and Owner Costs of regulated portion of the GGP	5,496	5,472	5,308	5,309	5,312	5,312
Superannuation	151	150	150	0	0	0
Total	5,646	5,622	5,458	5,309	5,312	5,312

281. It can be seen that these corporate costs, including the superannuation adjustment, are lower than the corporate costs including superannuation submitted in the April 2009 Supporting Information to the Proposed Revisions to the GGP Access Arrangement in Table A4.26. This is notwithstanding the fact that these revised corporate costs are based on 2009-10 budget costs not 2008-9 budget costs, and are based on a higher revenue allocator than the previously submitted costs.

[33] This ratio is the ratio of GGT employees on defined benefit schemes to total APA employees on defined benefit schemes.

282. Furthermore the level of these costs is supported by an independent KPMG benchmarking report. The KPMG report concludes that an expected range of Non Capital corporate costs (in $2009) is for an asset with the characteristics of the covered portion of the GGP is approximately $5.85 million. The corporate costs above are similar to this KPMG benchmark cost.

283. As such GGT believes this is demonstrates that these costs are the costs incurred by a prudent Service Provider, acting efficiently, in accordance with accepted and good industry practice.

284. GGT submits that it has demonstrated that the categories and levels of corporate costs which GGT is seeking to recover are such as would be incurred by a prudent service provider. GGT does not believe that the current approach in the Draft Decision of disallowing these costs is valid as it provides no evidence that these costs do not meet the test in Section 8.37 of the Code, beyond noting the fact that the cost forecasts are greater than the forecasts in 2005.

285. GGT submits that a prudent Service Provider, acting efficiently, in accordance with accepted and good industry practice would incur these costs, and there is no substantive argument in the Draft Decision to demonstrate support for the contrary proposition.

286. Amendment 10 of the Draft Decision seeks that the Non Capital Costs in the Access Arrangement Information should be amended to reflect the values in Table 19 of the Draft Decision. For the reasons outlined in sections 4.3 and 4.4 above, GGT is not prepared to amend the corporate cost component of the Non Capital Costs to reflect the values in Table 19 of the Authority's Draft Decision.

287. At the time that GGT submitted its Proposed Revisions to Access Arrangement in March 2009, the GGT was still carrying out its budgetary process for the 2009/10 financial year, including the budgeting of corporate costs, primarily from the APA Group. The GGT 2009/10 Budget, including corporate costs from the APA Group is now finalised and Table 4-8 and reflects these latest forecasts.

288. At the time that GGT submitted its Proposed Revisions to Access Arrangement in March 2009, the GGTJV were still carrying out its budgetary process for the 2009/10 financial year. The GGTJV 2009/10 Budget is now approved and the following Table 4-9 reflects these latest forecasts, which are used in the revised Reference Tariffs being submitted.

289. GGT recognises that the corporate costs discussed and shown above are in financial years and are in real terms. To make these costs consistent with the financial modelling required for the Access Arrangement these costs are now adjusted to take account of:

- calendar years – this adjustment is a simple halving and re-addition of the various costs. The fact that these costs are forecasts means that any greater precision is unlikely to be beneficial; and
- Inflation – the costs are then escalated by inflation of 2.4% per annum.

290. Table 4-9 reflects these latest forecasts, which are used in the revised Reference Tariffs being submitted.

Table 4-9 Corporate Costs and Superannuation ($m, nominal)

	2010	2011	2012	2013	2014
Corporate Costs	5.6	5.7	5.7	5.9	6.0
Superannuation	0.2	0.1	0.1	0	0
Total of Corporate Costs and Superannuation	5.8	5.8	5.8	5.9	6.0

4.5 Asymmetric Risk

291. GGT proposed that an allowance be made in the non capital cost cash flows for asymmetric risk of $500,000 per annum. The Draft Decision rejected this proposal.

292. In particular the Draft Decision (paragraph 645) and Amendment 10 required that the Access Arrangement Information be amended to reflect the values in Table 19 of the Draft Decision. Table 19 of the Draft Decision has a value of zero for asymmetric risk.

293. For the reasons outlined below GGT is not prepared to amend Non Capital Costs in the Access Arrangement Information to reflect the values in Table 19 of the Authority's Draft Decision with regard to asymmetric risk.

294. GGT believes these costs are valid and comply with s8.37 of the Code.

GGT's Proposal

295. In the revised Access Arrangement GGT proposed an allowance in the non capital cost cash flows for asymmetric risk of $500,000 per annum, where asymmetric risk refers to the asymmetry of risk and returns arising from the existence of regulation. Regulated entities face asymmetric risk as the distribution of expected regulated returns are truncated at the upper end. These truncated returns arise directly as a consequence of regulation, and consequently the regulated asset requires compensation for bearing these risks which it cannot avoid or mitigate.

296. These risks can be both systematic and non-systematic in nature. While the cost of capital compensates for symmetric systematic risks it does not compensate for asymmetric risks. These risks, along with non-systematic risks that arise as a consequence of regulation, need to be compensated for in the cash flows. The way in which these risks arise was detailed in the report by Synergies, which accompanied GGT's proposed revisions to its Access Arrangement. The Synergies report stated that:

> *Skewed or truncated returns arise because of the inherent nature of the assets, or, importantly, as a consequence of regulation itself. The returns that the owners of regulated infrastructure are able to earn are generally not allowed to exceed the regulated rate of return while the owners remain exposed to possible under-performance. In this way regulation limits the*

> *upside of risk to the owners while leaving the owners generally exposed to the downside of the risk.*[34]

297. A probabilistic approach was applied by Synergies to quantify these risks. This involved the following steps:

- identifying the possible risks arising from regulation;
- estimating correlations between identified risks, to ensure that asymmetric risk was not overstated;
- establishing the probability of occurrence;
- understanding the extent to which the risks could be mitigated (for example, via a contract with a customer); and
- quantifying the risk.

298. A number of risks were identified but after considering potential mitigation strategies the only risk remaining was asset stranding risk. The risk was quantified by considering the revenue impact if a customer failed. The probability of failure was linked to the volatility in nickel prices, which was established based on historical data. If a customer did fail, assumptions were made regarding how long it would take before that customer was replaced. The consequence of asymmetric risk was then quantified based on a stochastic simulation.

299. Consequently GGT sought to incorporate an allowance for asymmetric risk into its non capital cost cash flows for bearing these risks which it cannot avoid. The allowance was based on a detailed probabilistic approach which was used to quantify asymmetric risk at $490,000 per annum. This allowance was based on conservative assumptions, which were set out in the Synergies report[35].

Authority's Response

300. The Authority rejected GGT's proposal for an asymmetric risk allowance on the following grounds:

- the Authority has not previously approved an allowance for asymmetric risk;
- the Authority is not satisfied that an allowance for asymmetric risk meets the requirements of Section 8.37 of the Code; and
- the Authority believes that a prudent Service Provider would incorporate demand risk into a probabilistic demand forecast. Thus the Authority recognises that risk exists but believes it should be addressed in another variable.

301. With regard to these arguments GGT notes that they are largely based on excerpts and citations from the Authority's 2005 Final Decision on the GGP. In 2005 GGT's proposed asymmetric risk allowance was supported by an analysis prepared by NECG. The Authority's response in the 2005 Final Decision was that it did not accept that the allowance met the requirements of Section 8.37 of the Code, and that in any

[34] Synergies Economic Consulting (2009), Asymmetric Risk: The Importance of Recognition and Compensation, March, p.9.

[35] Synergies Economic Consulting (2009), Asymmetric Risk: The Importance of Recognition and Compensation, March, p.23

case, a prudent service provider would incorporate this into probabilistic demand forecasts. However, it did not provide any specific comment as to why it did not meet the requirements of the Code, nor did it make any mention of the analysis that had been undertaken by NECG or identify any specific issues or concerns it had with that analysis.

302. The Authority has essentially provided the same response in the current Draft Decision. However again, apart from making what are essentially generic references to the Code, it has not provided any specific comment or specific reasoning as to why the proposal does not meet the requirements of the Code. It also does not provide any feedback on the method used to estimate the allowance, based on the report prepared by Synergies.

303. The key problem is that the Authority has not engaged with either NECG's analysis in 2005 or the Synergies analysis in 2009. In both instances the Authority has not explained why the methods used were not appropriate methods for quantifying asymmetric risk.

304. More directly on the points above which formed the grounds for the Draft Decision's rejection of asymmetric risk, GGT notes that the Authority has previously approved costs labelled as "asymmetric risk costs"[36] but GGT acknowledges that the actual nature of these costs were more in line with the self insured costs proposed by GGT, and as such the Authority has not previously approved costs of the nature being proposed.

305. On this point GGT believes that previous regulator non-approval of a valid cost does not justify ongoing non-approval of that cost; the Code 8.37 allows a Reference Tariff to recover all non capital costs except for any such costs that would not be incurred by a prudent Service Provider, acting efficiently, in accordance with accepted and good industry practice.

306. The asymmetric risk cost is a cost to the business but it is not willingly incurred by the service provider. It is a cost which applies to all regulated service providers (be they prudent or imprudent, efficient or inefficient) as a result of the regulatory process which truncates the distribution of expected regulated returns at the upper end.

307. Consequently the cost of asymmetric risk should be included as it is a non capital cost incurred by all service providers (including prudent service providers). Given the cost arises due to the operation of the regulatory system then it should be assumed that it is being incurred in accordance with good industry practice.

308. The Authority recognises that the risk exists, as it expresses a view that the risk should be taken into account via a probabilistic demand forecast taking into account assessments of probabilities of demand for individual users. As noted above, this position was first put forward by the Authority in 2005. Furthermore in 2005 the Authority noted that:

> *The probability distribution of future demand for pipeline services underlying assessment of asymmetric risk in demand is an assumed probability distribution that is not based on any rigorous assessment of future gas demand by current Users, Prospective Users or gas demand in the region serviced by the GGP. GGT has not established that demand risk is*

[36] ERA 2005 Final Decision on Proposed Revisions to the Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline 2 November 2005 pp57-70

> *"fundamentally asymmetric in character" or that, if it is, there is a greater risk of decreases rather than increases in demand.*[37]

309. This concern was restated in the current Draft Decision.

310. The Authority's position on this issue, as outlined above, was interpreted by GGT as the Authority seeking further information on this issue. GGT therefore sought further expert advice. First, the Synergies report established why the risk was asymmetric in nature and was necessarily incurred as a direct consequence of regulation. For example:

> *If demand and production for nickel is high and therefore the ability to pay for production inputs is also high, in a competitive commercial arrangement, higher prices could be charged. In the case of a regulated asset such as the Goldfields Gas Pipeline, there is a ceiling above which prices cannot be charged. A regulated business is unable to capture the upside. On the downside, when businesses who are customers of the pipeline fail there is a loss in revenue. Thus the pipeline is exposed to the downside but not the upside. Take or pay contracts are of little consequence where a customer is in liquidation. All businesses, both regulated and non regulated are faced with this consequence.*[38]

311. The Authority has not provided any feedback on why the proposal has not demonstrated that the risk is asymmetric in nature, or in other words, why it considers that this risk is symmetric.

312. Indeed, based on the Authority's reasoning cited above, it appears to have interpreted the relevant question to be whether the risk of demand changes is asymmetric, that is, is there a greater risk of demand increasing or decreasing. This is not the relevant question – the risk that is asymmetric is the impact of demand changes on GGT's revenues. As outlined above (and addressed in more detail in the Synergies report), in the long term GGT is fully exposed to the downside risk if demand deteriorates significantly, however as a regulated business it is unable to capture the upside when demand peaks (presuming the capacity is available).

313. For example, an unregulated business may be able to increase prices in more buoyant market conditions, which can offset its exposure to downside risk when the market is flat and customers' capacity to pay is likely to be lower. GGT cannot do this. It is not demand itself that is inherently asymmetric. It is the *impact* of demand changes on the business, which in turn arises because the returns that the business can earn are truncated as a consequence of regulation. This is the risk that is asymmetric.

314. Second, as outlined above, the approach used by Synergies sought to estimate the probability of failure by individual customers, which was linked to the volatility of nickel prices (this included considering the implications if the customer was part of a joint venture). GGT is not in a position to do a detailed customer-by-customer credit analysis, nor does it consider this to be the relevant exercise. In any case, GGT could lose a customer for reasons other than the failure of that business. The customer might reduce its demand, or close its operations altogether (including temporarily), if conditions in its commodity markets become unfavourable. The willingness and ability

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[37] ibid., p.82.

[38] Synergies Economic Consulting (2009), op.cit., p.21.

of companies to place certain mines into 'care and maintenance' was observed when commodity prices deteriorated following the downturn in the global economy.

315. The outcome of this process was that $490,000 was needed in cash flows to compensate for this asymmetric risk.

316. Given the Authority appear to recognise that the risk exists, it should be indifferent as to whether the risk is addressed in the volume forecasts or the non capital cost forecasts. The impact of both forecasts will flow though to the tariff such that the final impact will be identical.

317. GGT also notes that under Section 8.2(c) of the Code:

> *...any forecasts required in setting the Reference Tariff represent the best estimates arrived at on a reasonable basis.*

318. As outlined above, the allowance estimated by Synergies was based on reasonably conservative assumptions. One of these assumptions was that the probability of customer failure was a one in fifty year event, notwithstanding that extreme changes in nickel prices were normally one in twenty year events.

319. GGT questions whether the Authority is likely to ever accept demand forecasts that reflect these risks. First, the horizon of the forecasts is limited to the regulatory period. The risk of asset stranding is a long-term risk, and hence the horizon of the analysis is long-term. This will not necessarily be reflected in a five year forecast horizon. Second, the focus of the Authority (and stakeholders) is likely to be on ensuring that the forecasts represent the 'best' estimate of demand over the next five years. GGT anticipates that practical opposition would be encountered to adjusting demand forecasts for long-term demand risk.

320. It is not open to the Authority under the Code to dictate the building block through which the cost will be recovered. Having regard to the requirements applying to the proper exercise of regulatory discretion under the Code (as discussed at the beginning of GGT's submission) the Authority must be able to provide clear grounds as to why the mechanism proposed by GGT is unreasonable or otherwise inconsistent with the requirements of the Code. If this is not shown, and the alternative mechanism proposed by the Authority is seen to achieve the same purpose, then there is no valid basis on which the Authority can reject the proposal submitted by the service provider. In any case, for the reasons set out above, GGT does not consider that demand forecasts are an appropriate mechanism for capturing asymmetric risk.

321. More generally GGT contends that the Authority has rejected GGT's proposed approach to asymmetric risk notwithstanding that the proposal falls within a reasonable range of outcomes consistent with the Code principles.

322. Further, the Authority notes that BHPB opposed the proposal for asymmetric risk and the Authority agrees with BHPB on this issue. The substantive argument put forward by BHPB was:

> *GGT argues that take-or-pay contracts provide no protection to the downside risk, as they are of little consequence where a customer is in liquidation. GGT focuses on the effect upon revenue if a customer failed. As noted previously, GGT's largest single customer is BHPB which is estimated to account for approximately 50% of total GGP throughput. Due to its strong balance sheets and credit rating, the risk of insolvency is clearly speculative and should not be taken into account.*

> *GGT, in its scenario analysis, appears to have focused on junior miners which have much higher operating leverage (thus higher risks) than their largest customers and collectively represent a much smaller portion of GGT's revenue not to mention the fact that GGT appears to ignore the benefits offered by credit support provisions of the General Terms and Conditions.*

323. The fact that BHPB has a strong credit rating and balance sheet does not invalidate the analysis for the following reasons:

- BHPB is not actually a customer of the pipeline. Customers of the pipeline are BHPB subsidiaries. The contracts between the pipeline and these BHPB subsidiaries often have no recourse, or limited recourse, to the parent BHPB company. In these cases the strength of BHPB is irrelevant, what is relevant is the strength of the subsidiary.
- other Users of the pipeline are not necessarily in the same financial position as BHPB; and
- the impact of GGT of customer 'failure' could also occur where a company made a strategic business decision to reduce its consumption, seek to terminate a contract, or not renew a contract, if it reduced the production of that mine or chose to temporarily and permanently cease operations altogether. GGT expects that a large, competitive global operation such as BHPB would be particularly well positioned to manage its operations in this way.

4.5.1 Conclusions

324. GGT does not accept the Draft Decision Amendment to delete the asymmetric risk costs from the Non Capital Costs in the Access Arrangement Information. GGT submits that these costs are valid and comply with s8.37 of the Code and it is at the service provider's discretion as to the means by which these costs are recovered under the revised Access Arrangement.

4.6 Non Capital Costs Conclusions

325. For the reasons expressed in section 2 above and in this section, GGT is not prepared to amend Non Capital Costs in Table 10 of the Access Arrangement Information to reflect the values in Table 19 of the Authority's Draft Decision.

326. For the Covered Pipeline, Forecast Non Capital Costs were shown in Table 10 of GGT's Access Arrangement Information submitted in March 2009. For the Covered Pipeline, the revised Forecast Non Capital Costs are shown in Table 4-10 below:

Table 4-10: Revised Non Capital Costs ($m, nominal)

	2010	2011	2012	2013	2014
Operating & Maintenance and Administration & General	24.2	20.3	21.2	23.0	24.8
Corporate Overheads (including Superannuation)	5.8	5.8	5.8	5.9	6.0
Asymmetric Risk	0.5	0.5	0.5	0.5	0.6
Total	30.5	26.6	27.6	29.4	31.3

5 Volumes

Amendment 12

> *Table 12 of the Access Arrangement Information setting out volume forecasts in TJ/day should be amended to include volume forecasts for the Additional Services arising from the Expansions of Capacity as set out in Table 26 of this Draft Decision.*

GGT Response:

327. For the reasons expressed in section 2 above, GGT is not prepared to amend the Volume Forecasts in Table 12 of the Access Arrangement Information to reflect the values in Table 26 of the Authority's Draft Decision.

328. The forecast MDQ and average throughput (terajoules per day) for the Covered Pipeline was shown in Table 12 of GGT's Access Arrangement Information submitted in March 2009 and is repeated below. Note that, in Table 5.1, GGT has corrected a typographical error in 2013.

Table 5-1: Volume Forecast TJ/D

Forecast	2010	2011	2012	2013	2014
Capacity (MDQ, TJ/day)	108.0	108.0	108.0	108.0	108.0
Contracted capacity (MDQ, TJ/day)	103.73	103.81	103.73	104.04	104.08
Available Capacity (MDQ, TJ/day)	4.27	4.19	4.27	3.96	3.92
Average daily throughput (TJ/day)	88.8	88.8	88.9	88.8	88.8
Total throughput (PJ)	32.4	32.4	32.5	32.4	32.4

329. On 24 November 2009, the Authority requested an explanation from GGT of how the volume information submitted on 7 July 2005 was different to the volume information that GGT had supplied on 5 June 2005 in response to a notice under Section 41, of Schedule 1 of the Gas Pipelines Access (Western Australia) Act 1998 (Section 41 Notice).

330. In reviewing the information supplied in July 2005 and in June 2009, GGT has uncovered two errors in the MDQ information that it supplied to the Authority under a Section 41 Notice, as a result of uncovering historical correspondence that was not available at the time of this submission plus a spreadsheet error. GGT will be providing in separate correspondence explanatory details of these errors to the Authority and with an accompanying amended response to the Section 41 Notice.

331. As a result of this investigation GGT has identified a small error in its 2010 - 2014 Volume Forecast. The correction of this error, amounting to 1 TJ/day (i.e. approximately 0.9% of total load) is reflected in Table 5-2 below showing the revised Volume Forecast that will be incorporated into GGT's revised Access Arrangement Information to be submitted at a later date.

Table 5-2: Revised Volume Forecast TJ/D

Forecast	2010	2011	2012	2013	2014
Capacity (MDQ, TJ/day)	109.0	109.0	109.0	109.0	109.0
Contracted capacity (MDQ, TJ/day)	104.73	104.81	104.73	105.04	105.08
Available Capacity (MDQ, TJ/day)	4.27	4.19	4.27	3.96	3.92
Average daily throughput (TJ/day)	89.5	89.5	89.6	89.5	89.5
Total throughput (PJ)	32.7	32.7	32.8	32.7	32.7

6 Extensions/Expansions Policy

332. Amendment 44 of the Draft Decision put forward two key changes to the proposed Extensions/Expansions Policy (EEP), notably:

> *1214. The Extensions/Expansions Policy in GGT's Proposed Revisions should be amended, in order to comply with the requirements of Section 3.16(a) of the Code, to provide:*
>
> *a) In relation to any extension to the Covered Pipeline during the Access Arrangement Period, GGT may elect either that the extension be treated as part of the Covered Pipeline for all purposes under the Code or (subject to notification to the Authority) that the extension not be treated as part of the Covered Pipeline for any purpose under the Code.*
>
> *b) In relation to any expansion of the capacity of the Covered Pipeline during the Access Arrangement Period, the expansion will be treated as part of the Covered Pipeline for all purposes under the Code (with the effect that Services provided by means of the Expansions of Capacity must be made available by GGT to Users in accordance with the terms of the Access Arrangement).*
>
> *1215 Otherwise, GGT's Proposed Revisions in relation to the Extensions/ Expansions Policy is approved by the Authority.*

333. In response, GGT has submitted a revised EEP to address Amendment 44. In summary:

- GGT accepts the amendment to include a methodology to address treatment of extensions in the EEP.
- GGT does not accept that all expansions of the pipeline be automatically considered as part of the Covered Pipeline for all purposes under the Code.
- GGT's EEP includes a component of the current EEP omitted by Amendment 44, which the Draft Decision found to be acceptable.

334. This section discusses Amendment 44 in the context of the Extensions Policy, the Expansions Policy, and proposes a revised Code-compliant Extensions and Expansions Policy.

6.1 Non-Compliant Extensions/Expansions Policy

335. The Draft Decision notes that the proposed EEP is not Code-compliant in that it does not address extensions to the Covered Pipeline (Draft Decision paragraph 1199).

336. The Draft Decision is that the EEP should provide for GGT to elect whether extensions should be considered as part of the Covered Pipeline (Draft Decision paragraph 1214).

337. GGT acknowledges that the current and proposed EEP does not deal with extensions, and will adopt the Authority's amendment in relation to extensions

6.2 Revised Extensions/Expansions Policy

338. Incorporating the minor change agreed in section 6.1 to the revised Code-compliant EEP, Section 10.2 becomes:

> 10.2 Application of Arrangement to Pipeline Extension/Expansion
>
> If GGT expands the Capacity of the Covered Pipeline, GGT will elect

(a) that the extension or expanded capacity will be treated as part of the Covered Pipeline for the purposes of this Access Arrangement and GGT will exercise its discretion to submit proposed revisions to the Access Arrangement under Section 2 of the Code; or

(b) that the extension or expanded capacity will not be treated as part of the Covered Pipeline for the purposes of this Access Arrangement and that GGT will lodge a separate Access Arrangement for such expanded capacity; or

(c) that the extension or expansion will not be Covered, subject to GGT notifying the Regulator of this fact prior to the expansion coming into operation.

GGT may at any time, change an election made under clause 10.2(c) to an election made under clause 10.2(a).

339. GGT has also included the previously approved (and as proposed by GGT), paragraph to change an election from one made under clause (c) to one made under clause (a) – that is, to bring previously excluded extensions or expansions into the Covered Pipeline. As the Authority did not discuss this aspect in its Draft Decision, this clause should be re-introduced consistent with the Draft Decision's finding in Draft Decision paragraph 1215.

6.3 Rejection of Code-Compliant Extensions/Expansions Policy

340. The Draft Decision rejected the GGT-proposed EEP on the grounds that:

> *1201 Under Section 2.46 of the Code the Authority may only approve proposed revisions to an Access Arrangement if it is satisfied that the Access Arrangement as revised would contain the elements and satisfy the principles set out in Sections 3.1 to 3.20 (including Section 3.16). GGT's Proposed Revisions do not satisfy this requirement because they do not specify a method to determine whether future extensions to the Covered Pipeline will be Covered by the Code.*

341. GGT contends that the Extensions/Expansions Policy required by Amendment 44 as it relates to expansions is not Code compliant in that it does not include a method to determine whether any expansions are, or are not, to be treated as part of the Covered Pipeline for any purposes under the Code, as required by Section 3.16.

342. By changing the EEP to provide for pipeline extensions, the EEP will then be Code compliant and GGT will have addressed the Authority's reasons for finding the EEP non-Compliant as discussed in Draft Decision paragraph 1199.

343. GGT submits that, once the grounds for rejecting the proposed EEP have been addressed, and the EEP as revised is Code compliant, the Regulator is not further empowered to make other changes to the compliant EEP. GGT submits that the revised proposed EEP is Code compliant.

344. Consistent with GGT's previous submission on the proper exercise of regulatory discretion under the Code,[39] GGT submits that:

[39] Australian Competition Tribunal Application by GasNet Australia (Operations) Pty Ltd [2003] ACompT 6

- There is no single correct Extensions/Expansions Policy required to be Code compliant.
- GGT's currently proposed Extensions/Expansions Policy is within the reasonable range of complying outcomes under Section 3.16
- There are no conflicts or tensions in the application of the requirements for an Extensions/Expansions Policy.

345. Where the EEP proposed by the Service Provider falls within the range of choice reasonably open and consistent with Section 3.16, GGT submits that it is beyond the power of the Relevant Regulator not to approve the proposed EEP simply because the Relevant Regulator prefers a different EEP which it believes would better achieve the Relevant Regulator's understanding of the statutory objectives of the Code.

346. There are numerous potential Extensions/Expansions Policies which are Code compliant:

- Election by the Service provider with notification (not consent) to the Regulator (current approved Goldfields Gas Pipeline).
- Election by the Service Provider on coverage after consultation (not approval) with the Regulator (Roma to Brisbane Pipeline);
- Election on inclusion in the Covered Pipeline by the Service Provider with coverage election subject to Regulator consent (Amadeus Basin – Darwin pipeline);
- Election by the Service Provider with consent of regulator (Moomba – Sydney Pipeline);
- Expansion included with such capacity offered at the Reference Tariff (Central West Pipeline);

347. GGT submits that Section 3.16 of the Code gives the Service Provider discretion on the content of the EEP, and the only question for the regulator is whether the EEP proposed by the Service Provider complies with the Code. Following GGT's previous submission on regulatory discretion, the Relevant Regulator's decision is limited to an assessment of whether the proposed EEP is Code compliant; it does not extend to address how expansions will be treated for the purposes of the Code.

348. GGT submits that Amendment 44 violates these principles, as it requires an amendment in the case where the proposed EEP was within the range of choice reasonably open and consistent with Section 3.16.

6.4 Blanket Requirement for Expansions to be Covered

349. The Draft Decision requires that, where the pipeline is operating at or near capacity, all expansions of capacity are to be Covered. The Draft Decision argues, citing the ACCC as precedent[40], that coverage of the expansions is required because there is scope for the Service Provider to exercise a degree of market power. The Draft Decision references the MAPS Access Arrangement process in this finding (paragraph 1206).

[40] ACCC 2003, Final Decision: Moomba to Sydney Pipeline System Access Arrangement, page 293

350. The MAPS decision, on which the MSP AA Decision and the Authority's Draft Decision rely, was set aside by the Australian Competition Tribunal.[41]

351. In setting aside the ACCC's decision, the Tribunal assessed the very arguments relied on in the Draft Decision in the MAPS case (see paragraphs 44, 47 and 48).

352. In the MAPS decisions the Tribunal reaffirmed its position in *Duke Eastern Gas Pipeline Pty Ltd*[42] that, in order for the ACCC to require coverage of expansions based on a market power argument, *"the increase in competition to result from coverage should be* 'not trivial' *before a pipeline was brought under the provisions of the Law for regulation as a Covered Pipeline. That is, given the costs of coverage, coverage should be pursued only if a* 'not trivial' *increment to competition can be expected to follow"* [paragraph 104].

353. Consistent with the findings of the Australian Competition Tribunal, GGT submits that, in order for the Authority to require expansions of capacity to be Covered, it must demonstrate that GGT's ability "*to exercise market power is such as to have a commercially and socially significant impact, both in quantum and in sustainability. It must be non-trivial, and non-transient. It must have a significant effect on some aspect of competition in a relevant market.*" [Re Epic Energy, paragraph 113]

354. GGT submits that the Authority has not established "*the existence of market power, and the ability to exercise it systematically*", and this is therefore another reason why the Draft Decision is in error in requiring all expansions to be automatically Covered.

6.5 The Coverage Body

355. The Authority has previously acknowledged that it is not the coverage body and that GGT should not require the Authority's approval to elect for expansions of the pipeline to be considered to be not part of the Covered Pipeline for any purposes under the Code (ERA 2005 Final Decision 17May05 para 782 et seq):

> *782. The Authority noted in the Amended Draft Decision that it does not itself have jurisdiction over whether a pipeline or part of a pipeline (including an extension or expansion to an existing Covered Pipeline) becomes Covered under the Code. Rather, the pipeline owners may elect for a pipeline or part of a pipeline to become Covered, or the relevant Minister may so determine. Section 1 of the Code contains detailed provisions for any party, including the Authority, to make an application to the relevant Minister, through the National Competition Council, to require that an extension or expansion to a pipeline form part of a Covered Pipeline.*
>
> *783. While the Authority was not satisfied that it should require GGT to seek the Authority's approval of any decision that a particular extension/expansion become or not become part of the Covered Pipeline, the Authority took the view that it is reasonable for the Access Arrangement to include a provision that the Authority be notified of any decision by a Service Provider as to whether or not an extension/expansion is to become part of the Covered Pipeline.*

356. The following amendment was required in the Amended Draft Decision:

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[41] Re Epic Energy South Australia Pty Ltd [2003] ACompT 5 (10 December 2003). GGT notes that the Tribunal's MAPS decision was handed down after the ACCC MSP decision.

[42] [2001] AcompT 2

> *Clause 10.3 of the proposed Access Arrangement should be amended to indicate that where GGT determines that an extension or expansion to the Pipeline will not be subject to the Access Arrangement, that GGT will provide written notice to the Authority of this determination. (Amendment 32)*

357. GGT submits that this was the correct interpretation of the Code powers in 2005, and remains the correct interpretation of the Code today. The Authority is not the coverage body under the Code, and GGT submits that it is beyond powers for the Authority to assert jurisdiction over coverage related matters.

6.6 Approaches to Coverage

358. GGT notes that the Code includes clear processes for determining Coverage. The nominated coverage body under the Code is the relevant Minister, who is to act on a recommendation of the NCC.

359. The Code provides for three ways a "new" pipeline can be Covered

- by an application for coverage being made and then determined by the Minister (Sections 1.3 to 1.19);
- by the service provider voluntarily submitting an AA (Section 1.20), or
- through the competitive tender regime (Section 1.21).

360. There is no provision in the Code that gives the economic regulator power to make decisions as to coverage.

361. Further, the Code (via Section 1.3) provides a regime if capacity is built and not voluntarily Covered by the service provider. It also provides a regime for resolving disputes as to whether new capacity should be built (through the arbitration process). There is therefore a complete regime for both how new capacity/pipelines are Covered.

362. GGT submits that the economic regulator is not empowered to override the coverage mechanisms in the Code and mandate coverage of all capacity expansions.

6.7 Policy Intent

363. GGT submits that the concept of whether capacity expansions should be automatically Covered has been extensively debated through the Ministerial Council on Energy reform process relating to the drafting and finalisation of the National Gas Law and Rules. After an extensive consultation process, the conclusion of the Ministerial Council on Energy, as reflected in the National Gas Law and Rules, remains that expansions of capacity should not be automatically considered to be part of the Covered pipeline. This is clearly evidenced in the National Gas Law:

- in the definition of extension and expansion requirements;
- in the definition of transmission pipeline; and
- in Section 18

364. and in Rule 104 of the National Gas Rules.

365. GGT submits that the inclusion in the National Gas Law of the definition of extension and expansion requirements and the Rules' inclusion of Rule 104, after extensive policy debate on the treatment of expansions, demonstrates that the enduring policy intent and language of both the Code and the Rules is that the Service provider can propose an EEP that provides that expansions will not automatically be Covered.

366. GGT therefore submits that the Draft Decision's requirement to automatically include all capacity expansions as part of the Covered Pipeline is contrary to the policy intent applicable to the Gas Access Regime.

6.8 Trigger Event Mechanism

367. Amendment 45 requires the Access Arrangement to include a Revisions Trigger Mechanism (part 3.4).

368. Following on from the discussion of the Extensions and Expansions Policy, the Draft Decision requires GGT to insert a trigger event mechanism tied to the capacity of the pipeline. GGT does not accept this required amendment for the reasons discussed below:

- The Revisions Trigger Event hinges on the decision on the definition of the Covered Pipeline and GGT's elections that expansions of capacity can be considered to be not part of the Covered Pipeline for any purposes under the Code;
- The Revisions Trigger Event therefore duplicates the processes for filing revisions to the Access Arrangement included in the Extensions and Expansions Policy;
- The Revisions Trigger Event is tied to the pipeline licence, which is not part of the Authority's jurisdiction, not to the capacity of the Covered Pipeline.

369. GGT submits that the Draft Decision's premise in requiring the trigger event mechanism is intricately tied to the definition of the Covered Pipeline (see Draft Decision paragraph 1256). The Code's requirements and GGT's position on this matter is discussed in section 2 of this submission and will not be repeated here. In summary, the foundation premise on which this Trigger Event Mechanism is built is not valid, and this undermines the legitimacy of the Trigger Event Mechanism.

370. As discussed above, a Code-compliant Extensions and Expansions Policy allows the Service Provider to elect whether or not an expansion of capacity is to be considered as part of the Covered Pipeline for the purposes of the Code. The current (Authority-approved) and proposed EEP both include scope for such an election.

371. GGT is concerned that the trigger event mechanism required in the Draft Decision may be misconstrued as providing for the coverage of any expansions of the pipeline. Code Section 3.17(b) is clear in its purpose to allow the Relevant Regulator to "*require that specific major events be defined that trigger an obligation on the Service Provider to submit revisions [to the Access Arrangement] prior to the Revisions Submission Date*". GGT submits that the Code requires an Access Arrangement to be filed only in respect of a Covered Pipeline:

> *Where a Pipeline is Covered, this section of the Code requires a Service Provider to establish an Access Arrangement to the satisfaction of the Relevant Regulator for that Covered Pipeline.[preamble to Code Chapter 2]*
>
> *2.2 If a pipeline is Covered, the Service Provider must submit a proposed Access Arrangement together with the applicable Access Arrangement Information for the Covered Pipeline to the Relevant Regulator…*

372. However, the Draft Decision's trigger event mechanism is tied to the pipeline licence, not to the Covered Pipeline (Amendment 45).

373. In the event that the capacity of the GGP is expanded, GGT may file an election, in accordance with Section 3.16 of the Code, that the capacity expansion is not to be considered as part of the Covered Pipeline for any purposes under the Code.

374. Where GGT expands the capacity and files such an election, there would be an increase in the capacity of the GGP, but no increase in the capacity of the Covered Pipeline, to which the Access Arrangement relates.

375. GGT submits that Amendment 45 would then result in an inappropriate and unnecessary requirement to file revisions to the Access Arrangement based on a trigger event that is not related to the Covered Pipeline.

6.8.1 Scope to require trigger mechanism

376. The Draft Decision correctly identifies that Code 3.18 only allows the Regulator to require a trigger mechanism on Access Arrangements with a duration greater than five years. The Draft Decision then uses Code Section 3.17(ii) as the avenue to introduce this requirement (Draft Decision paragraphs 1247 to 1248).

377. GGT notes that paragraph 1248 of the Draft Decision enumerates a number of the objectives in Code Section 8.1, but does not appear to conduct any assessment of the requirement for a trigger mechanism against those objectives in order to reach a conclusion that the trigger mechanism is required to achieve those objectives.

378. GGT submits that the Draft Decision does not clear the hurdle required in Code Section 3.17(ii) to have due regard to the objectives in Section 8.1 to require a trigger mechanism.

6.8.2 Duplication of EEP Provisions

379. GGT's proposed Extensions and Expansions Policy already addresses the actions to be taken in the event of an expansion of the capacity of the Covered Pipeline.

380. The proposed EEP in this regard is consistent with the requirements of Code Section 3.16(b), which requires the EEP to "*specify how any extension or expansion which is to be treated as part of the Covered Pipeline will affect Reference Tariffs*". This is currently addressed in clause 10.3(a) of the proposed Extensions and Expansions Policy.

381. GGT submits that the EEP is the proper place to deal with the consequences of the expansion being Covered. In this case, Part 3 of Amendment 45 creates a duplicate obligation to lodge revisions to the AA.

6.8.3 Characterisation as forecasting error

382. The Draft Decision characterises the need for the trigger event mechanism as a response to an error relating to the forecast of load and demand. GGT submits that the scope for load forecast errors to have an impact on tariffs is limited to the available capacity of the Covered Pipeline. As the current capacity of the Covered Pipeline is 109TJ/day and the current tariffs are calculated based on that 109TJ/day being contracted (GGT bears the risk of being able to contract the 4TJ/day of available capacity) there is no scope for load forecast errors to impact the Access Arrangement.

383. In this regard, GGT submits that the impact of load forecast error is insufficient to justify an additional regulatory mechanism to be imposed on the Service Provider.

384. As a second order concern, GGT is of the view that a trigger event mechanism should be tied directly to the matter of interest. In this case, the Draft Decision is interested in errors in forecast demand. To this extent, the trigger event mechanism should be tied to the actual demand served from the Covered Pipeline, rather than to a proxy such as the combined capacity of the Covered and non-Covered Pipeline.

6.8.4 Regulator's rejection of Code-compliant proposal

385. GGT submits, as discussed above in the context of the Extensions and Expansions policy, where the Service Provider has proposed a Code-compliant approach to determining tariffs in the event of a capacity expansion of the Covered Pipeline, it is beyond the power of the Relevant Regulator not to approve the proposed approach simply because it prefers a different approach which it believes would better achieve the Relevant Regulator's understanding of the statutory objectives of the Law.

386. GGT has proposed a Code-compliant provision in clause 10.3 of the proposed EEP, as required under Code Section 3.16(b), to identify the impact on tariffs of any extensions or expansions of the Covered Pipeline. This clause has been accepted in the Draft Decision.

387. GGT therefore submits that it is inappropriate for the Draft Decision to require a further trigger event mechanism.

7 Rate of Return

7.1 Summary of GGT Position on Rate of Return

388. Amendments 8 and 9 of the Draft Decision requires that in relation to Rate of Return, Table 8 of the Access Arrangement Information should be amended to reflect the values in Table 15 of this Draft Decision and GGT's Proposed Revisions should be amended to adopt a nominal pre-tax Rate of Return of 10.28%.

389. GGT does not accept these amendments.

390. In particular GGT, based on the reasons outlined in the chapter, submits that the following rate of return parameter values should be used:

Credit rating:	BBB- to BBB
Debt Margin:	4.58% to 4.38%
Debt Raising Costs:	0.75%
Market Risk Premium:	6% to 7%
Gamma:	0% to 40%
Equity Beta:	1.4 to 1.0

391. When the parameter values above are used in combination with other accepted parameter values a pre-tax nominal WACC in the range 15.1 % to 11.9% is derived. Within this range a pre-tax nominal WACC of 14.3% has been used as the cost of capital parameter in determining Reference Tariffs.

392. GGT submits that the Authority in the Draft Decision has failed to provide :

393. A return commensurate with the prevailing conditions in the market for funds and the risks involved in the GGP:

(i) failed to adequately take account of GGT's legitimate business interests and investment in the GGP:

(ii) has ignored the advice of its own expert; and

(iii) has derived an unreasonable outcome on the rate of return.

7.1.1 Code Requirements

394. This section addresses Amendments 8 and 9 of the Draft Decision. These amendments require the adoption of the values in Table 15 of this Draft Decision and the adoption of a nominal pre-tax cost of capital of 10.28%.

395. GGT's position is that the purpose of the Draft Decision is to provide the service provider and other interested parties with a statement of the facts and principles relied upon by the Authority for requiring amendments to the proposed Revised Access Arrangement. This then enables the service provider to make submissions in response to the Draft Decision and, if appropriate, resubmit a revised version of the Access Arrangement which incorporates the required amendments or otherwise addresses the matters the regulator identified as being the reasons for requiring the amendments specified in its Draft Decision.

396. Sections 8.6 and 8.7 of the Code affirm that in determining such matters as the Rate of Return the Regulator is obliged to identify any financial and operational performance

indicators taken into account in determining an appropriate value, and explain how these have been applied.

397. Further, Section 2.6 of the Code requires an Access Arrangement Information to contain information which will enable an understanding of the derivation of the elements in the proposed Access Arrangement and allow an opinion to be formed on the compliance of those elements with the Code. It follows that any change required by the Draft Decision to aspects of the Access Arrangement Information should meet the requirements of Section 2.6 and similarly set out sufficient information to allow such an assessment.

398. The Code provisions and requirements outlined above indicate a legislative intention that the Draft Decision should provide sufficient reasoning to substantiate any amendments it requires to matters such as the values used to derive a cost of capital.

399. GGT submit that the Draft Decision does not provide sufficient reasoning to substantiate the amendments.

7.1.2 Background

400. GGT proposed a range for the pre-tax nominal WACC of between 11.0% and 13.8%. It was submitted that the point estimate should be selected towards the upper bound of this range at 13.5% in recognition of the inherent uncertainties associated with the estimation of WACC and the asymmetric consequences of error. It was also submitted that GGT's price cap regulation exposes it to greater long-term volume risk than businesses that are subject to a revenue cap.

401. The Authority has proposed a pre-tax nominal WACC range of 9.11% to 11.46%. For the purpose of the Draft Decision it has adopted the mid-point of the range, being 10.28%.

402. The Authority states that the proposed rate of return will comply with the Code:

> *...if the value used by GGT is within the range of values that different minds acting reasonably might attribute to the Rate of Return, applying the methodology of the CAPM that was chosen by GGT.*[43]

403. The Draft Decision rejects many of the parameter values submitted by the GGT. However, it is not evident that the Draft Decision has considered in any detail either GGT's proposal and the advice of its own consultant, Frontier Economics. Given that GGT and Frontier Economics are "*different minds acting reasonably*" then instances where the views of GGT and Frontier Economics on parameter values overlap would seem to be instances of reasonable ranges for parameter values.

404. In its decision in relation to GasNet, the Australian Competition Tribunal ('the Tribunal') recognised the range of reasonable outcomes within which a Reference Tariff determination could fall:

> *…there is no single correct figure involved in determining the values of the parameters to be applied in developing an applicable Reference Tariff. The application of the Reference Tariff Principles involves issues of judgement*

[43] Economic Regulation Authority (2009), Draft Decision on GGT's Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline Submitted by Goldfields Gas Transmission Pty Ltd, para.408.

> *and degree. Different minds, acting reasonably, can be expected to make different choices within a range of possible choices which nonetheless remain consistent with the Reference Tariff Principles.*[44]

405. The Tribunal highlighted that the focus of regulatory decision-making should be on the reasonableness of the proposal submitted by the regulated entity. With respect to WACC, this requires an assessment of the extent to which GGT's proposal is within a range of reasonable outcomes.

406. There are two main points arising from this.

- the risk that regulators may pursue an unrealistic degree of precision where it cannot be attained. This risk is particularly relevant in relation to WACC given the degree of judgment that must be applied. GGT recognises that by using the ranges approach the Authority accepts this point.
- the focus of the regulator should be on assessing the reasonableness of the proposal submitted by the service provider. GGT is concerned that the Authority has not given due consideration to GGT's proposal. The key areas where GGT considers the Authority's proposed parameter values are flawed are the market risk premium, equity beta, debt margin, debt raising costs and gamma. GGT believes the parameter values and approaches put forward by the Authority have not given due consideration to supporting information and argument put forward by GGT. Further the Authority has disregarded its own consultant on key aspects[45].

407. GGT's response to the Authority's position on all material individual parameters is set out below. This response is supported by the accompanying submission by Synergies Economic Consulting (Synergies), which has further addressed key points of difference between the positions of GGT and the Authority in regard to the individual parameters and provides more substantial and detailed support for the GGT position.

7.1.3 The Market for Funds and the Global Financial Crisis

408. Section 8.30 of the Code states that

> *...the Rate of Return used in determining a Reference Tariff should provide a return which is commensurate with prevailing conditions in the market for funds.*

409. At the current time the "*market for funds*", namely world debt markets and world equity markets, are in a state of uncertainty and volatility.

410. In its original proposal GGT set out its concerns in relation to the impact of the global financial crisis on investment in infrastructure in general and pipeline infrastructure in particular. While there are some signs that the global economy may be entering the later stages of this crisis (although indicators remain mixed), the dominant position in

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[44] Application by GasNet (Australia) Operations Pty Ltd [2003] AcompT 6, para 29.

[45] The Authority engaged Frontier Economics to assess GGT's proposed Rate of Return. GGT accepts that the Authority is not bound to accept the advice of Frontier Economics. However, GGT contends that where the Authority chooses to depart from Frontier's recommendations, it is obliged to provide logical reasoning for doing so.

global capital markets continues to be one of uncertainty, and a consequent reluctance to fund investment.

411. For example, in a recent speech the Governor of the Reserve Bank commented:

> *The large downside risks that were evident six months ago have also diminished. Significant risks, nevertheless, remain. Activity has recently been boosted by temporary fiscal measures and a slowing in the pace of inventory run-down, with the durability of the pick-up in growth remaining uncertain. Banking systems in a number of countries are still some way from full health and further bad news in the financial sector cannot be ruled out. Dealing with fiscal challenges is also likely to be a constraint on growth over the medium term in some of the advanced economies.*[46]

412. The Economist Intelligence Unit has noted that despite improvements in the economy, credit conditions remain strained:

> *Despite a welcome improvement in liquidity in money markets and massive issuance of corporate bonds, credit conditions remain strained. This partly reflects the need of banks to rebuild their balance sheets, particularly in the light of an adverse feedback loop between the financial sector and the real economy, where tightening financial conditions hit economic growth and weaker activity pushes up bankruptcies. The realisation that a broad range of countries, not just the US, have seen an excessive increase in house prices and that an adjustment is necessary will also increasingly hit banks, as mortgage defaults will continue to rise...*
>
> *The financial support measures will not lead to a significant pick-up in bank lending globally. Demand for new borrowing will remain soft and the world's financial sector looks set for a prolonged period of shrinkage. Credit provided by non-bank financial institutions such as hedge funds has been scaled back dramatically and banks are also cutting back as they focus on rebuilding their balance sheets by cutting lending exposure.*[47]

413. In its Global Financial Stability Report released in October 2009 the International Monetary Fund noted that while there has been a marked recovery since its April 2009 report, recovery is still likely to be slow. Its analysis concluded that US banks are only likely to about half-way through their loss cycle, with loss recognition considerably less in Europe.[48]

414. There is no evidence to suggest that following the later stages of this crisis conditions in financial markets will revert to *'pre-crisis'* conditions. It is likely that the crisis has altered the way that investors, both shareholders and lenders, assess risk and return. Rather than assume financial markets will revert to pre crisis positions it is more likely that a change is taking place in financial markets and following the crisis, new financial benchmarks and practices will replace previous benchmarks and practices. Cost of capital assumptions based on pre-financial crisis benchmarks are likely to be less relevant in assessing forward looking cost of capital benchmarks.

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[46] Reserve Bank of Australia (2009), Statement on Monetary Policy, 6 November, http://www.rba.gov.au/PublicationsAndResearch/StatementsOnMonetaryPolicy/statement_on_monetary_1109.html

[47] Economist Intelligence Unit (2009), "The Road to Prosperity", 5 November 2009, p.6.

[48] International Monetary Fund (2009), Global Financial Stability Report: Navigating the Financial Challenges Ahead, October.

415. For example, a submission made to the Authority in October 2009 by the Financial Investors Group in response to its Draft Decision on Western Power's South West Interconnected Network observed that the actual cost of equity for Australian utilities is currently materially higher than that implied by the Authority's proposed treatment of the rate of return.[49] It stated that existing assets require returns on equity of at least 11% to 15% and new equity requires at least 15% to 18%. As a consequence, the proposed regulatory rates of return could have a material and adverse impact on future infrastructure investment. These higher required rates of return are a consequence of the financial crisis, and potential indicators of new financial benchmarks with respect to the cost of equity.

416. GGT does not consider that the Authority has sufficiently taken the impacts of the crisis into account and this will be further exacerbated if the Authority selects a rate of return point estimate based on the mid-point of the range.

7.2 Specific parameters

7.2.1 Nominal risk-free rate of return

417. The Authority has accepted GGT's proposal in relation to determining the risk-free rate of return, which is to be based on a twenty day average of the ten year Commonwealth Government bond yield. It is understood that this will be updated prior to the Final Decision.

418. The value used by GGT for the purpose of the rate of return analysis in this response is 5.37%. This is based on an average of the 20 days from 22 September to 19 October 2009[50]. GGT understands that this value is indicative only, as it will be updated by the Authority prior to the Final Decision.

419. GGT notes that it is common practice for regulators to give the regulated business advance confidential notice of the averaging period prior to its Final Decision, which enables the business to execute any necessary refinancing and / or hedging strategies in relation to its borrowings. In some cases the regulator determines the period and advises the regulated business. In other cases the business proposes the period to the regulator.

420. For example, under the National Electricity Rules the business can propose the relevant period. If the regulator does not agree to this proposal the period will be determined by the regulator. In this regard GGT observes the recent decision of the Tribunal[51] to overturn the regulator's decision to reject an averaging period submitted by the relevant businesses in favour of the regulator's own period (when the risk-free rate was at historical lows). The Tribunal ruled that the regulator (the AER in this case) had unreasonably exercised its discretion in this regard.

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[49] The Financial Investor Group (2009), Supplementary Submission to the ERA Regarding its Draft Decision on Western Power's Proposed Revisions to the Access Arrangement for the South West Interconnected Network, October.

[50] This averaging period was used to align with the period over which Synergies conducted its analysis of alternative methods of estimating the debt margin.

[51] Australian Competition Tribunal, Application by EnergyAustralia and Others [2009] ACompT 8.

421. GGT seeks that the Authority gives GGT advance confidential notice of the averaging period prior to its Final Decision, in order to allow the GGT to execute any necessary financing strategies

422. GGT notes that Commonwealth Government bond yields have increased significantly since the beginning of 2009 and that the reduction of the risk-free rate that was observed following the deepening of the crisis, has now been reversed (even though the impact of the crisis continues to be seen elsewhere in the capital markets, particularly in the corporate bond market, as discussed in sections 7.2.4 and 7.2.5 below).

423. At the present time GGT considers that it is appropriate to set the risk-free rate over a twenty day period that is close to the Final Decision.

7.2.2 Market risk premium

424. GGT proposed a market risk premium (MRP) value of 7%, based on comprehensive evidence presented to the AER by the Joint Industry Associations in the recent AER electricity WACC review. In this review the AER concluded that a market risk premium of 6.5% is appropriate.

425. In response the Authority is proposing a MRP value in a range between 5% and 7%.

426. The Draft Decision notes (paragraph 452) that a MRP of 7%, as proposed by GGT, is within a reasonable range of estimates.

427. Further to this, the Draft Decision (paragraph 449) refers to advice from the Authority's consultant Frontier Economics that the GGT proposal is "*not unreasonable in the current market*". Frontier Economics in their report also note that[52]

> *For all of the reasons set out above, our view is that 6% is an appropriate lower bound for the reasonable range in the current circumstances.*

428. Notwithstanding these assessments, the Draft Decision (paragraph 454) has concluded that the MRP should be set in the range 5% to 7%. The reasoning provided is that such a figure is consistent with both the specific approach taken in relation to the Access Arrangement for the South West Interconnected Network (SWIN) and historical regulatory practice in general. In regard to this historical regulatory practice Synergies note (Synergies report page 16) that of forty-one energy regulatory decisions since 2000, there are only five where a value of less than 6% has been used in the Final Decision and that four of these decisions were made by the Authority. As such GGT has does not believe a MRP value of 5% is justified by reference to historical regulatory practice in general.

429. The Authority engaged Frontier Economics to assess GGT's proposed cost of capital including MRP. Frontier Economics concluded that a range of between 6% and 7% is reasonable for the MRP. The Authority considers that by extending the upper bound of its range for the MRP to 7% it takes into account the impact to the global financial crisis. However, it then selects its point estimate from the middle of its proposed range, giving a MRP of 6%, which is the value applied by the majority of other Australian

[52] Frontier Economics (2009), Review of Weighted Average Cost of Capital Estimate Proposed by Goldfields Gas Transmission, Final Draft Report Prepared for the Economic Regulation Authority, 6 August, page 17.

regulators in decisions prior to the global financial crisis. This point is expanded on in the accompanying Synergies report (Synergies pages 14 to 17). This is lower than the MRP value of 6.5% that was recently determined by the AER in recognition of the impact of the global financial crisis.

430. The AER's value is equivalent to the mid-point of the range proposed by Frontier Economics. Frontier states that while 6% might be an appropriate value for the MRP in normal market conditions, it concurs with the AER's conclusion that a MRP above 6% is reasonable at the current time:

> *There seems to be little disagreement on this point. Consequently, the central question is one of magnitude – the present estimate of MRP should be greater than 6 per cent, but what is an appropriate estimate?*[53]

431. Frontier Economics concludes:

> *We are also of the view that the 7 per cent proposed by GGT is not unreasonable in the current market circumstances – given present levels of dividend yields, debt spreads, and option implied volatilities. Consequently, we have adopted a range of 6 per cent to 7 per cent for the market risk premium. We also note that this is consistent with the recent point estimate of 6.5% adopted by the AER as part of its review of WACC parameters.*[54]

432. GGT accepts that the Authority is not bound to accept the advice of Frontier Economics. However, GGT contends that where the Authority chooses to depart from Frontier Economic's recommendations, it is obliged to provide logical reasoning for doing so. In relation to the determination of the value of the MRP, the GGT believes the Draft Decision does not provide sufficient reasoning for the Authority taking a position which departs from that recommended by Frontier Economics.

433. The Synergies report (Synergies pages 15 to 16) questions the Authority's rationale for choosing a value below 6% for the lower bound for its range and also whether there is sufficient current evidence to support this lower bound. Synergies (Synergies page 18) agrees that a range of between 6% and 7% is reasonable for the MRP.

434. The techniques for assessing MRP values are being further developed. GGT understands that electricity distributors have recently received evidence from Officer and Bishop[55] which develops a forward looking MRP estimate for the 2011 to 2015 regulatory period of 8%. This value is derived using the implied volatility of a call options on the All Ordinaries Index to make a forward estimate of market volatility. When assessed against historical evidence these forward looking estimates have a high degree of correlation.

435. The GGT believes this new evidence provides important information regarding the value of the MRP in the current market environment and should be considered along with other evidence in order to arrive at a reasonable forward looking estimate of the long-term MRP. In particular, the study provides important information regarding the potential departure of the MRP from its long-run average as a consequence of the global financial crisis and how long this might persist. If valid, that the evidence could indicate that the reasonable range for the MRP may be extended to beyond 7%.

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[53] ibid.

[54] ibid., p.17.

[55] Dr. S. Bishop & Professor B. Officer, Market Risk Premium, Estimate for 2011 – 2015, October.

436. The Draft Decision's MRP range and its decision to select an estimate from the mid-point of the WACC range results in a MRP of 6%. The Draft Decision conclusion that the MRP should be set at 6% appears based on reasoning that such a figure is consistent with the approach taken in relation to the Access Arrangement for the SWIN and historical regulatory practice. GGT contends that neither of these reasons justify refusing the proposed MRP which the Draft Decision and Frontier Economics accept falls within the reasonable range of complying outcomes.

437. Further, every proposal must be determined on its merits, and there is no reasonable basis for assuming that the conditions and arguments used in the case of the SWIN or other historical regulatory decisions should automatically be applied to the GGP, even if these arguments were valid at the time they were made.

438. In particular the Authority's MRP value does not take any account of the impacts of the global financial crisis.

439. The lower MRP value also results in a cost of equity for the GGT that is lower than the cost of equity that would apply to a similar business that is regulated by the AER. As the GGT competes for funds with regulated businesses in jurisdictions where energy infrastructure is regulated by the AER this will bias equity investment away from Western Australia and towards jurisdictions where energy infrastructure is regulated by the AER, and which consequently have a higher MRP[56]. Thus a MRP of 6% will create a bias in investment decision making which will place GGT at a relative disadvantage in a market where conditions are already extremely difficult.

440. GGT previously proposed a point estimate for the MRP of 7%. This proposal was made prior to the finalisation of the AER electricity WACC review. While this proposed value is within the bounds of the range proposed by Frontier Economics, GGT is prepared to accept a range of between 6% and 7% as the long-term reasonable range of values for the MRP. This acceptance is conditional on further developments related to the Officer and Bishop evidence which has recently been released.

441. A MRP range of between 6% and 7% is consistent with the advice provided by Synergies and the recommendations of the Authority's own consultant, Frontier Economics. The mid-point of the range put forward by Synergies and Frontier Economics is 6.5%, which is also consistent with the position of the AER

442. In taking this position on MRP at the present time, GGT does not consider that any point estimate below 6.5% is reasonable in the current financial climate. Any point estimate in the current financial climate has to be taken from the upper end of the 6% to 7% range.

443. GGT does not accept that any values for the MRP below 6% could be considered to be within the reasonable range, nor does the analysis from the Authority's consultant support this view.

[56] This assumes that the AER regulatory decisions will allow a cost of equity which is conducive to investment. The concerns raised in the Financial Investors Group submission previously cited regarding the perceived inadequacy of the regulated cost of equity raises doubts as to whether AER or Authority regulatory decisions will allow a cost of equity which is conducive to investment.

7.2.3 Equity beta

444. For the revised Access Arrangement GGT proposed an equity beta value of between 1 and 1.8.

445. The Authority's consultant, Frontier Economics, recommended a range of between 0.8 and 1.2. The lower bound of this range reflects the value of the electricity transmission and distribution equity beta determined in the AER's WACC decision. The upper bound is based on its assessment of comparable companies.

446. GGT remains of the view that beta estimation is a key area where there remains considerable uncertainty in relation to its *'true'* value and hence the risk of regulatory error remains very high. On the other hand, the Authority states that since the first energy determination for beta was made in 2000:

> *...there have been many further empirical studies of beta values that have been subject to considerable scrutiny and debate as part of regulatory processes. This has resulted in greater weight being given by regulators to capital market evidence on beta values and a consequent downward trend in the beta values being applied in regulatory decisions.*[57]

Use of Electricity Beta Values as Comparators are Flawed

447. The key reason that there has been so much '*scrutiny and debate'* is because this issue has remained a highly contentious one. This in turn is due to the number of issues that need to be considered and the questions that have been raised regarding the quality of the 'capital market evidence' that has been relied upon by regulators in arriving at their estimates. The weight of evidence submitted by the JIA in the recent AER electricity WACC review questioning the sample relied upon by the AER, and its analysis of that sample, highlights this issue.

448. Further to this issue, much of the regulatory scrutiny and debate has focussed on electricity network assets which serve major population centres via network infrastructure. As noted in the original GGT submission[58] the GGP is not comparable to such infrastructure, particularly given the nature of the GGP end-use market. As such benchmark comparisons between the GGP and electricity networks with regard to cost of capital parameters are as flawed as they would be for other cost parameters such as operating cost.

449. Reliance on equity beta values determined in regulatory processes relevant to electricity networks and then transferring the results to the GGP will not result in a cost of capital for the GGT commensurate with the risks faced by the GGP. As such the low end of the equity beta range of 0.8 should be dismissed as it is based on a comparator with little in common with the GGP.

450. As will be set out below, a more appropriate lower bound for equity beta is 1.0.

Equity Beta Analysis

451. GGT requested Synergies to undertake an updated equity beta analysis, addressing the issues that have been raised by the Authority and its consultant, Frontier

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[57] Economic Regulation Authority (2009), op.cit., para 470.

[58] Goldfields Gas Pipeline (2009) Supporting Information to Proposed Revisions to Access Arrangement April 2009, page 13.

Economics. Some of the particular concerns that were raised by Frontier Economics include:

- the implications of the first principles analysis for GGP's beta;
- the sample used to estimate the beta of the mining companies, how the estimate was applied and the filtering of the comparator sample based on the t-statistic.

First Principles Analysis

452. GGT believes that the unique profile of GGP's customer base (being almost solely exposed to a relatively small number of miners of three commodities) results in greater systematic volume risk compared to other pipeline businesses. One of the main concerns raised by Frontier Economics in relation to the first principles analysis was the need to be able to quantify the impact of different factors on beta, and in particular, the mitigating impact that the take or pay position in GGP transport contracts might have on its volume risk.

> *The GGT submission notes that there are some aspects suggesting that the systematic risk of the GGP is higher than that faced by the average pipeline business (exposures to customers whose fortunes are cyclical and linked to broad market movements) and some evidence that systematic risk is below average (substantial longer-term take-or-pay contracts). There is no compelling evidence to suggest which of these effects might dominate the other...* [59]

453. As outlined in the Synergies report (Synergies pages 19 to 22), the first principles analysis is a qualitative assessment and it is not possible to estimate the specific impact of each factor in isolation with precision. It is unreasonable to dismiss first principle analysis simply because it is not possible to precisely measure its impact. If the expectation is that this precision needs to be able to occur in order for the first principles analysis to be able to play any significant role in the assessment, this expectation is considered highly unreasonable. If the impact of a risk is considered too difficult to measure that does not mean that this risk should be ignored. GGT recognises that the analysis is qualitative and it has limitations given that subjective judgment must be applied, however, it provides an important theoretical foundation for the analysis. In particular, it is used to assess the risk of the GGP relative to other gas pipelines.

454. The main criticism of the first principles analysis related to the impact of contractual take-or-pay provisions on volume risk. Frontier Economics indicated that GGT did not present any analysis to show that the impact of its unique customer base (and hence volume risk) dominated the impact of the protection provided under contractual take-or-pay provisions. Further, it had not shown how the GGP compares with other pipelines on these metrics.

455. In the previous submission[60] evidence was presented to show why GGP's customer base differs from the average pipeline business which has an exposure to a mix of residential, commercial, industrial and power generation customers. GGP only has

[59] Frontier Economics (2009), op.cit., p.34.

[60] Goldfields Gas Pipeline (2009), op.cit., pages 22-23; and Synergies Economic Consulting (2009), Goldfields Gas Pipeline Access Arrangement 2009: Equity Beta Analysis, March.

exposure to activities related to nickel, gold and iron ore mining. However, information on take-or-pay exposures is commercially sensitive and hence it is not possible to directly compare GGP's take-or-pay protection with other pipelines, other than those pipelines owned by the APA.

456. The most appropriate comparators available are other major contract carriage regulated pipelines owned by APA, as their 'average systematic risk' is reflected in the most common equity beta estimate that has been historically applied to regulated gas pipelines, which is 1.0. The two comparator pipelines owned by APA that are considered to best fit into this category are the Roma to Brisbane Pipeline (RBP) (which is subject to full regulation under the National Gas Law) and the Moomba to Sydney Pipeline (MSP) (which was subject to full regulation but which is now subject to light regulation). While information regarding the take-or-pay exposures is commercially sensitive it has been confidentially provided to the Authority in Appendix A in the accompanying report by Synergies.

457. This information shows that on average, across the RBP and MSP, the proportion of revenue subject to take-or-pay approximates the proportion of GGP's revenue subject to take-or-pay. On this basis, Synergies (Synergies report pages 21 to 22) conclude that the extent to which contractual take-or-pay provisions mitigate GGP's volume risk is no different from the average large regulated gas pipeline. Hence, to the extent that the impact of take-or-pay on beta is neutral relative to comparators, the key differentiating factor will be GGP's exposure to volume risk, which is driven by its customer profile, which, unlike the RBP and MSP, consists almost exclusively of mining-related activities.

Statistical Analysis

458. Synergies (Synergies report pages 24 to 27) has also updated the beta analysis based on the same comparator samples used previously. There were two samples examined here.

- The first was other gas transmission and distribution businesses, which are seen to approximate the 'core' systematic risk profile for GGP as a gas pipeline.
- The second comprised Australian mining companies. These can be used as a basis for adjusting for GGP's systematic volume risk, which differs from the average regulated pipeline due to the nature of its customers.

459. Overall, the Synergies report (Synergies report page 25) observed a marked reduction in the average betas of the sample of mining companies against their study previously submitted (noting that within the sample, some betas had fallen and some had risen). It is not clear why this is the case. It could be due to a number of factors, such as changes in average gearing levels, changes in the risk and/or composition of the market index, changes in the risk profile of other businesses or industries that comprise the market index, or changes in the risk profile of the firms themselves. This highlights the inherent uncertainty associated with beta estimation, and reinforces the need to select point estimate towards the upper bound of the range.

460. Frontier Economics (page 29) suggested that considerably more weight should be given to the beta estimates for BHP Billiton and Rio Tinto, observing that they are major customers of GGP. In making this suggestion Frontier Economics does not recognise that BHPB and Rio Tinto are not the actual contracted Users. Typically BHPB or Rio Tinto subsidiaries are the contracted Users and there are no ultimate parent company guarantees. As such the methodology proposed by Frontier

Economics is flawed as the risks of an internationally diversified resources company is likely to be considerably less than the risk of a single subsidiary, often focussed on a single location or mineral type. Nevertheless Synergies has undertaken analysis based on Frontier Economics' suggestion, however this analysis may understate risk for the reasons outlined above. This increased risk provides support for selecting the beta estimate from the upper bound of the range.

461. Frontier Economics[61] therefore estimated an average beta for its sample of mining companies weighted by market capitalisation. However, if the market capitalisation approach is applied, it assumes that these two companies account for over 85% of GGP's revenue. Such a weighting does not reflect the actual usage of the GGT by BHP Billiton and Rio Tinto.

462. The Synergies report (Synergies report page 28) has therefore proposed to determine an average for its sample based on the combined contribution the two companies make to GGT's revenue, which is approximately 50%. It therefore determined its average mining company beta by weighting as follows:

- 50% is based on the average asset betas of BHP Billiton and Rio Tinto (the asset beta of each company is close to one); and
- 50% is based on the average asset beta of the nickel, gold and iron ore sample (based on a simple average, not market capitalisation-weighted average), still excluding the firms with t-statistics less than two. As outlined in Synergies' previous report[62], these mining companies are relevant to GGP as GGP serves nickel, gold and iron ore mining provinces.

463. The resulting asset beta for the Australian mining company sample was 1.36.

464. Based on an examination of Australian and US gas transmission and distribution pipelines an asset beta of 0.4 was considered appropriate and this assessment was not altered following the updated review.

465. In arriving at the proposed asset beta for GGP, Synergies (Synergies report page 28) then applied the same adjustment that was applied previously, which was to weight the average betas from the gas and mining samples based on the proportion of GGP's revenues that are subject to contractual take-or-pay provisions. That is:

- a 17% weight was applied to the average mining sector beta (1.36) as this approximates the proportion of revenues that are exposed to volume risk;
- the balance of 83% was applied to the average asset beta for gas transmission and distribution pipelines (0.4).

466. That is, the proposed asset beta continues to be much more heavily weighted towards the average asset beta that is assumed to apply to the 'average' gas pipeline business.

467. The application of these weightings results in an asset beta of around 0.56, which is equivalent to an equity beta of 1.4 (assuming 60% gearing and applying the Authority's favoured re-levering method). It is recognised that this is only an approximation however it is considered preferable to simply making a subjective adjustment.

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[61] Frontier Economics (2009), op.cit., pages 29-31.

[62] Synergies Economic Consulting (2009), op.cit. Refer section 3.3.1.

468. Synergies (Synergies report pages 23, 26 to 27) also examined Frontier Economics' criticism[63] of its decision to exclude firms from its sample if the t-statistics were less than two. The t-statistic is used to test statistical significance. It is calculated by dividing the standard error of the estimate by the beta coefficient[64].

469. Synergies applied a threshold for the t-statistic of two, which it notes is a commonly applied statistical rule of thumb.

470. While Synergies (Synergies report page 23) agreed that estimates with very low beta coefficients can have a low t-statistic, estimates with a high standard error can also have a low t-statistic. It also noted that all of the estimates that had low t-statistics had extremely low R-squared statistics (some were close to zero).

471. The R-squared, or coefficient of determination, measures the explanatory power of the regression equation (that is, how much of the variability in the dependent variable can be explained by the independent variable). A low R-squared indicates that little of the variability in the returns on the relevant share (the dependent variable) can be explained by returns on the market (the independent variable). For a given level of '*noise*' in the data, a beta estimate approaching zero will normally be accompanied by a very low R-squared.

472. While Synergies notes that a low R-squared could legitimately reflect circumstances where the returns of the market have limited bearing on the returns of the firm (that is, the firm has very low systematic risk), it considers that any estimates with a R-squared of less than 0.1 should be viewed with caution, as this suggests that less than 10% of the variability in the firm's returns is explained by the returns on the market.

473. All of the firms in Synergies' analysis with t-statistics of less than two also had an R-squared of less than 10%. Synergies (Synergies report page 27) maintains that its rationale for excluding these estimates was to ensure statistical rigour and hence it continued to exclude these estimates from the sample.

Equity Beta Conclusions

474. GGT does not accept that the AER's equity beta determination for electricity transmission and distribution is relevant to gas pipelines, particularly the GGP. As such the lower bound of for the equity beat value of 0.8 is not relevant.

475. GGT maintains that the lower bound for GGP's beta should be set at an asset beta of 0.4, that is, an equity beta of 1. This reflects the equity beta value currently ascribed to gas pipelines which serve diversified markets in large population centres. It was also the value arrived at by Synergies based on its assessment of listed gas transmission and distribution businesses (Synergies report page 27). Therefore an equity beta value of 1.0 is reasonably seen as the lower bound for equity beta when considering a pipeline with a higher risk profile.

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[63] Frontier Economics (2009), op.cit., refer pages 27-28.

[64] The standard error measures the sampling variability or precision of an estimate. A high standard error indicates that the underlying distribution is large. A lower standard error is preferred as it indicates a more precise measure. This is done within a specified confidence interval (usually 95%).

476. Based on the most current market data, and the adjustments made by Synergies (Synergies report page 28) to reflect the composition of GGP's customer base, the upper bound is an asset beta of 0.56, that is, an equity beta of 1.4.

477. GGT previously proposed an equity beta range of 1.0 to 1.8. This is now revised to 1.0 to 1.4. This range is based on updated information and consideration of comments made by Frontier. GGT emphasises the inherent uncertainty associated with beta estimation, and the need to select an equity beta estimate towards the upper bound of the range.

478. In considering the beta analysis it should be recognised that it is based on the average term of the GGP contracts, not the remaining term of the contracts in place at the current time. (This is due to the fact that the time frame of the beta analysis is 'long term', that is it is beyond the term of the regulatory period). Thus the current analysis implies that 83% of revenue is as certain as the long term contract profile of the 'average' pipeline business over a long term time frame.

479. However it should be recognised that at or before 2015 out of nineteen current contracts three contracts expire. The information in Synergies' Confidential Appendix A also shows that there are some other contract features that expose GGP to the risk of a reduction in contracted volumes even before the contracts expire. These features increase GGP's exposure to volume risk in the short to medium-term and also show that GGP's exposure is not driven solely by default risk. These features allow for reductions in volumes and can be triggered by customers optimising their commercial position, and reducing their own risks, depending on conditions in their relevant commodity markets.

480. This further refutes the argument that take or pay offsets GGT's volume risk. Take or pay is only an offsetting mechanism if the counterparty on the other side of the contract is able to pay and a contract exists. Given many take or pay contracts are expiring or are otherwise eligible for renegotiation the value of take or pay as an offsetting mechanism is substantially reduced.

481. Overall these factors outlined above increase volume risk. This increased volume risk provides further support for selecting the beta estimate from the upper bound of the range.

482. GGT notes that the mid-point to upper end of the equity beta range of 1.0 to 1.4 is close to the equity beta that is implicit in the cost of capital contained in the Authority's 2005 determination in relation to GGP.

7.2.4 Debt margin

483. GGT proposed a value of 3.6% for the debt margin on the GGP as a BBB- rated asset. This value was based on observing Bloomberg's published yield on the eight year BBB bond and adding the margin between an A rated 10 year and 8 year bond. An adjustment was then made for the difference between the cost of issuing BBB and BBB- debt, based on one-third of the difference between an 8 year BBB and 8 year A rated bond.

484. GGT now addresses the rationale used in the Draft Decision to support the credit rating of BBB+ and the debt margin value of 2.8%.

485. The approach that is most commonly applied by regulators (including the Authority) to estimate the debt margin is to:

- establish an appropriate notional credit rating assumption; and

- estimate the benchmark cost of debt for a business with that notional credit rating raising funds in the current Australian market environment, over the same term as the risk-free rate (ten years).

486. GGT does not accept the Authority's assessment of the notional credit rating assumption, which is outlined below. However, at the current time there are some potentially significant issues with estimating the cost of debt, given liquidity conditions in the Australian corporate bond market have progressively tightened to the point where businesses that are rated low investment grade (such as BBB) have difficulty raising funds beyond five years. This recently culminated in Bloomberg ceasing to publish indicative eight year BBB bond yields (as well as eight and ten year A yields). While a number of issues had already been identified with these estimates prior to the cessation of publication (as will be outlined below), Bloomberg-based estimates were most commonly relied upon by regulators, including the Authority.

Notional credit rating

487. GGT proposed a notional credit rating of BBB-. This proposal was based on a sample of rated Australian gas pipeline and gas network businesses.

488. The Authority rejected GGT's proposed notional credit rating of BBB- and determined a notional credit rating of BBB+ should apply. The Authority's consultant, Frontier Economics, proposed a range of between BBB and BBB+. In deriving this value Frontier Economics referenced the sample of businesses that were referenced by the AER in arriving at its decision for electricity transmission and distribution. GGT considers that the AER sample was undertaken for a purpose under the national electricity law and that GGT's sample of comparator companies is more relevant to the GGP business.

489. The Authority did not specifically comment on GGT's sample or why it was not considered appropriate. Other than observing that BBB+ was at the upper bound of its consultant's sample, the Authority has not explained why it considers that BBB+ is a more appropriate notional credit rating assumption for GGP.

490. In response to comments made by Frontier Economics[65], Synergies (Synergies report page 40) has now also estimated projected interest coverage ratios for the GGP based on its proposed regulated cash-flows (noting that the final, approved cash-flows may be different from this). Based on indicative interest cover ratios for utilities published by Standard & Poor's, the projected interest coverage for GGP falls within the range for a BBB rated company and suggests that a rating of no higher than BBB is appropriate.

491. In the SWIN Draft Decision[66] the Authority assumed a credit rating of BBB+ for Western Power. GGT believes that the GGP has greater risk than the Western Power network and as such must be rated lower than BBB+.

492. GGP's majority owner, the APA Group, is rated BBB. This rating occurred after the GGP revised Access Arrangement was submitted in March, but well before the Draft

[65] Frontier Economics (2009op.cit., pages 34 -39.

[66] Economic Regulation Authority (2009), Draft Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network Reprinted 13 August 2009 Incorporates corrigenda of notice dated 13 August 2009 page 197, paragraph 711.

Decision was released in October. This rating was brought to the attention of the Authority in the BHPB submission[67].

493. APA is a large company holding a diversified portfolio of gas network assets. At maximum, this APA rating supports a GGT rating of no higher than BBB. The Authority rating GGP at BBB+ implies that the Authority views GGP as being less risky than the much larger and more diversified APA Group. Such a position seems unsustainable, particularly given the relatively short period of remaining contracted capacity may adversely impact on credit rating.

494. GGT considers that on a stand-alone basis the GGP's credit rating would not be as high as the average rating of the APA Group. GGT therefore remains of the view that a rating of BBB- is appropriate and its rating should certainly be no higher than BBB.

Debt margin

495. As outlined above, for some time it has been recognised that there have been issues with reliably estimating the cost of BBB debt for a ten year term given the lack of liquidity in the Australian corporate bond market. These issues actually pre-dated the global financial crisis but have become even more evident since then, with published indicative yields for long-term term BBB and A debt based on market data for considerably shorter maturities (which, assuming a normal upward-sloping yield curve, means that these indicative yields are most likely being under-estimated). The lack of depth and liquidity in the market for long-term lower investment grade debt has now reached the point where Bloomberg has ceased publishing the key yields[68] that were previously used by regulators such as the AER to estimate the ten year BBB cost of debt.

496. GGT understands that this issue is being examined in more detail by the Authority and other regulators including the AER and the ACCC. This includes considering alternative ways of constructing a yield curve from the limited market data. It should also be noted that GGT understands that the ACCC's Infrastructure Consultative Committee is currently considering a wide-reaching review of the impact of the global financial crisis on debt capital, including gearing, the cost of debt, the cost of equity and WACC. It will also seek to understand whether the changes that have been observed are temporary or more likely to be permanent.

497. GGT also notes that the AER has also since changed its position on this issue. In its final determination in relation to the Victorian Advanced Metering Infrastructure Review (AMI), released on 30 October 2009, the AER has applied the mid-point between Bloomberg and CBA Spectrum. In the decisions it has released since then, which include ACTEW AGL (gas distribution), Country Energy (gas distribution), and ENERGEX, Ergon Energy and ETSA Utilities (electricity distribution), it has solely relied upon CBA Spectrum. In estimating the debt margin to apply to GGT, the Authority's consultant, Frontier Economics (page 45) recommended the application of a range based on Bloomberg and CBA Spectrum.

498. In its Final Decision in relation to the SWIN the Authority has also recognised the use of both CBA Spectrum and Bloomberg in coming up with its range for the debt margin of

[67] BHPB (2009), Public Submission By BHP Billiton In Response to the Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement and Access Arrangement Information, 30 June, page 40.

[68] These key yields were yields on ten year BBB, eight year A and ten year A.

408 to 419 basis points. It has identified two ways of coming up with a Bloomberg estimate, which are considered further below.

499. The Synergies report (Synergies Report pages 43 to 54) has examined a number of possible alternatives ways of constructing a yield curve using the limited published data sources available. The most appropriate alternatives are summarised below. Indicative debt margin estimates are provided in brackets, based on a 20 day averaging period ending on the 19th of October 2009.

- **CBA Spectrum.** It remains the sole provider of ten year BBB bond yields in Australia. As outlined above, the AER has now accepted that this is a valid alternative. It reached this conclusion after testing CBA Spectrum's and Bloomberg's predicted yields against a sample of actual bonds. (458 basis points)
- Bloomberg 7 year BBB, extrapolated based on the difference between Bloomberg's published yields for 7 and 10 year AAA (corporate). While there are some concerns with assuming that the term structure inherent in the AAA yield curve can be applied to a BBB, noting that it is more likely to understate the term structure than overstate it, it is much more likely that the long term AAA yields are based on actual bond issues that are more likely to be traded and hence are at least reflective of actual market data. (438 basis points)
- **Bloomberg 7 year BBB, extrapolated based on the term structure of 5 year to 7 year BBB data.** As there are concerns assuming that the term structure of the AAA yield curve can be applied to BBB, this method only uses BBB data. The term structure between 5 years and 7 years is applied to the 7 year data and extrapolated to 10 years. This assumes the slope of the yield curve is constant. (437 basis points)

500. Based on the indicative margins estimated above, the resulting range based on these methods would be between 438 and 458 basis points (noting that the two Bloomberg-based estimates are very close). The average of the three methods is 445 basis points.

501. The second method used by Synergies was also used by the Authority in the SWIN Final Decision. However, Synergies (Synergies report pages 45 to 46) has identified issues with the third method used by the Authority in that decision, which is to adjust the 7 to 10 year AAA spread based on the ratio between the 7 to 10 year A spread and the 7 to 10 year AAA spread. This was seen by the Authority to address perceived deficiencies in the appropriateness of the AAA spread as a proxy for the 7 to 10 year BBB spread, given the divergence between the 7 to 10 year AAA spread and 7 to 10 year A spread it observed prior to the crisis. Synergies (Synergies report page 46) notes that this divergence could actually be due to the lack of liquidity in long-term A-rated bonds, which has ultimately led to the cessation of publication of this data by Bloomberg.

502. Hence, while the potential issues associated with applying the AAA spread need to be noted, the adjustment proposed by the Authority is not considered the appropriate response. It would be considered a reasonable adjustment if there was sufficient liquidity in the market for long-term A-rated debt, although if that were the case, there would be no need to reference AAA spreads to extrapolate the BBB estimate. Instead, Synergies (Synergies report page 46) states that sole reliance should not be placed on this one method.

503. Synergies (Synergies Report pages 47 to 48) also estimated a longer-term 'post commencement of GFC' average, which was taken between 1 October 2008 and 31

July 2009, which is the end of the month prior to the cessation of publication of the key BBB and A bond data. The average of CBA Spectrum and Bloomberg was 440 basis points.

504. GGT believes that in the current market environment, given the existing data sources available, it is not evident that there is one single 'correct' solution that can be used to estimate the cost of ten year BBB debt. On this basis, GGT therefore considers that it is appropriate to specify a range based on the alternatives set out above.

505. As outlined above, it is understood that the Authority and other regulators may examine other alternatives, including determining their own methodology to construct a BBB yield curve. GGT's main concerns with such an approach are being able to demonstrate that:

- the resulting yields are better predictors of the actual cost of debt than either Bloomberg or CBA Spectrum;
- the method is transparent and able to be readily understood; and
- it can be readily replicated by participants using current market data.

506. GGT had previously recommended making an adjustment to the debt margin to reflect the difference between a BBB and BBB-. Particularly given the issues associated with reliably estimating the cost of debt for a BBB, GGT is no longer proposing to make any further adjustment on this basis.

507. As stated above GGT recognise that current debt market information issues are concerning to regulators. However, the use of different methodologies by different regulators may result in misaligned WACCs in different jurisdictions. This will bias investment away from some jurisdictions and towards other jurisdictions and lead to inappropriate investment[69].

508. GGT believe that a value of 445 basis points is reasonable as a current estimate for the debt margin, understanding that this will be updated prior to the Final Decision.

509. This appears reasonable within the context of the recent decisions released by the AER (recognising that most of these decisions are in draft); where in all cases the debt margin applied was over 400 basis points. The notional credit rating for these businesses is BBB+. GGT also notes that the range applied in the Final Decision in relation to SWIN was between 408 and 419 basis points. As outlined above CBA Spectrum was one of the methods used by the Authority in that analysis.

7.2.5 Debt raising costs

510. In its original proposal GGT submitted that following the deepening of the global financial crisis the cost of raising debt had increased. Accordingly, it proposed a range for debt raising costs of between 0.125% and 0.3% per annum. The Authority rejected GGT's proposal in favour of an allowance of 0.125% per annum.

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69 In this context GGT notes that the methodology currently being used by the AER is to assess which of the Bloomberg or CBA Spectrum methodologies gives the best empirical results at a given point in time. At the current time the AER is using CBA Spectrum's fair value estimates. In November 2009 the AER methodology as outlined in the AER Draft Decision on the ActewAGL Access arrangement proposal for the ACT, Queanbeyan and Palerang gas distribution network gave a debt risk premium of 428 basis points.

511. In Confidential Appendix D provided to the Authority as part of the accompanying report by Synergies, information has been summarised from GGT's owner, the APA Group, on the actual costs that it has incurred this year in relation to over $2 billion of existing facilities and re-financings. This evidence shows that debt raising costs have increased materially, particularly the costs of syndicated bank facilities. This is seen to reflect the significant tightening in the availability of credit and the increase cost of commitment facilities due to new Basel requirements that have increased the cost of holding facility commitments. The increase in costs is therefore seen as a 'step change' in market terms and conditions and these new levels are expected to continue to be observed for the foreseeable future.

512. Based on the information provided, the estimate for debt raising costs is over 75 basis points per annum.

513. As outlined previously, APA Group owns a number of pipeline assets across Australia and has a total asset base of over $4 billion, which is likely to be significantly larger than the '*efficient benchmark firm*'. APA therefore enjoys economies of scale benefits in accessing debt markets and raising debt in those markets. This has been recognised by the AER, who has applied a '*sliding scale'* in determining the debt margin to apply to different businesses (that is, the more the amount of debt raised, the lower the margin applied).[70]

514. The actual debt raising costs incurred by GGT would therefore be higher than the costs incurred by the APA Group. As GGT cannot confirm how the costs incurred by APA Group might vary based on its level of debt, no adjustment to the indicative costs have been made. The proposed allowance is therefore considered to be conservative and would almost certainly under-estimate GGT's costs if it had to raise debt in the market on its own.

515. GGT therefore revises its recommended range for debt raising costs to be 0.750% per annum.

7.2.6 Corporate tax rate

516. The Authority has accepted GGT's proposed tax rate of 30%.

7.2.7 Franking credit value (Gamma)

517. GGT proposed a value of 20% for the value of franking credits (ie gamma). This value was based on comprehensive evidence presented to the AER by the Joint Industry Associations in the recent AER electricity WACC review. In this review the AER concluded that a gamma value of 65% is appropriate. GGT continues to believe that this value grossly overstates the value of gamma.

518. The Authority engaged Frontier Economics to assess GGT's proposed cost of capital, including gamma. Frontier Economics advised that gamma lies in a range of between 0% and 40%. This range seems consistent with GGT's point estimate of 20%.

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[70] For example, refer: Australian Energy Regulator (2009), Final Decision: New South Wales Distribution Determination, 2009-10 to 2013-14, 28 April. The AER cites a 2004 paper prepared by the Allens Consulting Group from which it sources the benchmark costs. Refer: The Allen Consulting Group (2004), Debt and Equity Raising Transaction Costs: Final Report, Report to the Australian Competition and Consumer Commission.

519. In relation to gamma GGT believes the Draft Decision does not provide sufficient reasoning for taking a position which departs from that proposed by GGT or recommended by Frontier Economics.

520. At no point does the Draft Decision express any disagreement with Frontier Economics' assessment. However in the Draft Decision (paragraph 527) the Authority derives a range for gamma of 0.57 to 0.81. The Authority appears to rely on data used by the AER in its analysis of gamma but not even the AER determined a range of 0.57 to 0.81.

521. GGT accepts that the Authority is not bound to accept the advice of Frontier Economics. However, GGT contends that where the Authority chooses to depart from Frontier Economics' recommendations, it is obliged to provide logical reasoning for doing so. The only reasoning provided is that this range would be consistent with the approach taken in relation to the SWIN and the values generally adopted by regulators of utility infrastructure in Australia.

522. GGT believes it is not reasonable to assume that decisions made in other regulatory decisions must necessarily be applied to the GGP. In circumstances where the Authority's consultant has advised that GGT's proposal is within a range of reasonable complying outcomes, and the Draft Decision has provided no reason for disputing such advice, GGT believes that the Authority is obliged to accept that these elements comply with the relevant requirements of the Code. As such, it is not open to the Authority to refuse the proposal simply because it prefers a different outcome which it believes would better achieve the Authority's understanding of the statutory objectives of the Code[71].

523. In the Draft Decision, the Authority did not seem to specifically respond to GGT's proposal or Frontier Economics' advice. Indeed, it is not clear that the Authority gave any consideration to this material at all beyond adopting a value which it had previously used. It is reasonable to expect that the Authority would provide some justification or reasoning as to why it is not considered acceptable. This is absent from the Authority's Draft Decision. GGT therefore finds it difficult to either respond to the Authority's reasoning or possibly amend its own position. In particular GGT finds it difficult to understand why its proposal does not at least fall within the bounds of a reasonable range when its proposed estimate is equal to the mid-point of the range recommended by the Authority's consultant.

524. GGT observes that there has been considerable controversy surrounding the AER's electricity WACC review conclusions in relation to gamma, which have been exclusively relied upon by the Authority. The Synergies report (Synergies report pages 30 to 37) highlights significant problems that have been observed with each of the key estimates that have underpinned its determined value of 65%. These problems are highlighted below.

Estimating gamma

525. Gamma is the proportion of the corporate tax which can be claimed as a tax credit against personal tax, that is, it is the value of personal tax credits. Once this value has

[71] See for example Re GasNet Australia (Operations) Pty Ltd (2003) A Comp T 6 paragraph 29

been determined, then either the WACC or the cash flows to which WACC is applied is adjusted to reflect the value of the tax credit to investors.

526. Gamma is the product of two inputs which must be estimated:

- the proportion of tax paid that has been distributed to shareholders as franking credits (the distribution rate or payout rate); and
- the value the marginal investor places on one dollar of franking credits, referred to as the value of franking credits (also referred to as 'theta').

527. While the distribution rate can be generally observed from taxation statistics, the value of franking credits cannot be directly observed. The value of franking credits is determined at the level of the investor and is influenced by the investor's tax circumstances. The value of gamma is between zero (no value from franking credits) and one (full value of franking credits).

528. Numerous issues have been identified with the assumptions arrived at by the AER for both the distribution rate and the value of franking credits. The most relevant of these issues are summarised below.

Distribution rate

529. The AER's proposed assumption of a 100% distribution rate differs from Hathaway and Officer's estimated market average of 71%[72], which is widely applied in practice. GGT submits that the AER approach, upon which the Authority relies, is fundamentally flawed in their estimation of distribution rate.

530. While the AER accepted that a reasonable average of the annual distribution rate is 71%, it concluded that it was reasonable to assume the full distribution of free cash-flows (that is, a distribution rate of 100%) because this is the standard assumption for valuation purposes. This was based on the advice of its consultant, Associate Professor Handley.[73]

531. The Joint Industry Associations (JIA) put forward a number of arguments as to why this was considered inappropriate, including demonstrating that retained imputation credits have little or no value to investors.[74] Based on its own analysis, the AER concluded that the time value loss associated with the value of imputation credits was not a material issue. Accordingly, it maintained its view that a distribution rate of 100% was appropriate.

532. Following the finalisation of the AER's *Statement of Regulatory Intent*, ETSA Utilities has commissioned Professor Bob Officer to review the estimation of the distribution

[72] N. Hathaway & B. Officer (2004), The Value of Imputation Credits – Update 2004, Capital Research Pty Ltd, November 2004.

[73] Australian Energy Regulator (2009), Electricity Transmission and Distribution Network Service Providers: Statement of the Revised WACC Parameters (Transmission), Statement of Regulatory Intent on the Revised WACC Parameters (Distribution), May.

[74] Refer: NERA (2009), AER's Proposed WACC Statement – Gamma, A Report for the Joint Industry Associations, 30 January.

rate as part of its regulatory proposal to the AER.[75] Officer disagrees with the AER's conclusion that the time value loss where credits are retained is not material:

> *The only time when the franked dividends attached to retained earnings (the franking account balance) have any value is when they are distributed. Moreover, the only time in which any of them would be distributed would be when the payout ratio is greater than 100%. Empirical evidence demonstrates that the overall distribution rate is significantly below 100%.*[76]

533. He concludes:

> *Assumptions of 100% distribution are unrealistic and not correct since a significant proportion of the franking credits are probably never distributed as franked dividends. It is incorrect to assume that all credits are eventually distributed...Long term averages estimate the economy wide distribution rate at about 70% and listed companies rarely exceed this rate.*[77]

534. In its recent Draft Decision for ETSA Utilities the AER rejected this response based on the advice of its consultant, Associate Professor Handley[78]. Handley continues to place reliance on theoretical assumptions, for example, that imputation credits are perpetuities, which in turn implies no growth, which in turn implies full distribution at the end of each period. (As noted in the Synergies report (page 31), the assumption that no growth means full distribution of credits at the end of each period is considered an unreasonable extension of logic.)

535. There is a risk that these simplifying assumptions result in an outcome that is too far an abstraction from reality. The alternative to making these assumptions is to apply the market average which is readily observed in practice, and is widely applied by market practitioners. Instead, debate continues to focus on assumptions which may or may not have been implied.

536. It is therefore considered that the AER's assumed distribution rate remains fundamentally flawed and should not be relied upon by the Authority. The Authority's consultant, Frontier, also disagrees with the AER's assessment:

> *Our view is that the role of the regulator is to estimate the cost of capital as it is in the real world, and that gamma should be estimated on the basis of the observed dividend payout practice of Australian firms and not on the basis of a hypothetically assumed one that is inconsistent with the empirical data.*[79]

537. GGT agrees that the appropriate distribution rate is 71%.

Lower bound for theta

538. As noted above, theta is a variable which represents the value of a franking credit in the hands of a shareholder, as a proportion of face value. This value is then multiplied by the distribution rate to arrive at a value for gamma.

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[75] R.R. Officer (2009), Estimating the Distribution Rate of Imputation Tax Credits: Questions Raised by ETSA's Advisers, 23rd June.

[76] ibid., p.1.

[77] ibid.

[78] Australian Energy Regulator (2009), Draft Decision, South Australia: Draft Distribution Determination 2010-2011 to 2014-15, November.

[79] Frontier Economics (2009), op.cit., p.19.

539. The AER arrived at its preferred value for gamma of 0.65 based on a lower bound estimate for theta of 0.57 and an upper bound of 0.74 (and then applying a distribution rate of 100%).

540. In arriving at its lower bound estimate, the AER solely relied upon a single study that sought to estimate the value of franking credits from market data, that is, a 2006 study by Beggs and Skeels. In doing this, the AER dismissed a number of reputable Australian studies, some of which concluded that the value of franking credits is zero or close to zero.

541. Further, a number of significant concerns were identified with the Beggs and Skeels study in two consultants' reports submitted to the AER by the Joint Industry Association.[80] One of these studies, being the report by SFG Consulting (SFG), sought to simply extend Beggs and Skeels' sample period to September 2006, making no other changes to the methodology or assumptions they applied, and arrived at a very different estimate for the value of franking credits, being 0.37. SFG also calculated an estimate after excluding 1% of the most influential observations in the sample to improve the consistency of the estimates through time. This resulted in a value of franking credits of 0.23.

542. As part of its regulatory proposal lodged following the conclusion of the AER's Electricity WACC Review, ETSA Utilities also submitted a paper by one of the authors of the study the AER relied upon, namely Skeels.[81] Skeels was asked to review the extension of the Beggs and Skeels analysis conducted by SFG and submitted to the AER, as cited above, as well as the AER's subsequent response to that analysis in its final *Statement of Regulatory Intent.* As part of its review of the SFG analysis, Skeels directed a number of questions to SFG, which were then responded to.

543. On reviewing the AER's dismissal of the SFG Consulting study, Skeels concluded that:

> *Many of the criticisms raised by the AER were little more than allusions to potential problems with the SFG analysis. In some cases I found that these allusions were ill-founded and readily dismissed. In other instances the appropriate response was to rework the model and to actually establish whether the concern was valid or not. This latter class of concerns was incorporated into the questions posed to SFG. I found their response to be convincing in as much as the potential problems were demonstrated to have little or no material impact on the results.*[82]

544. Skeels noted that some of the concerns that had been raised about the SFG study were more material. SFG responded to these issues and produced revised estimates. SFG arrived at a value of theta of 0.23. Skeels stated:

> *...the SFG estimate of theta of 0.23 represents the most accurate estimate currently available.* [83]

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[80] SFG Consulting (2009), The Value of Imputation Credits as Implied by the Methodology of Beggs and Skeels (2006), Report Prepared for ENA, APIA and Grid Australia, February; Synergies Economic Consulting (2009), Peer Review of SFG Consulting Reports on Gamma, A Report to the ENA, APIA and Grid Australia, January.

[81] C. Skeels (2009), A Review of the SFG Dividend Drop-off Study, 28 August.

[82] ibid., p.4.

[83] ibid., p.5.

545. Skeels concludes as follows:

> *It is clear that the more recent data used in the SFG results presented in Appendix I favour an estimate of theta that is lower than that of 0.57 which was obtained by Beggs and Skeels on the basis of less recent data. However, it might be argued that the minor methodological differences that remain between the methodology of Beggs and Skeels (2006) and that of SFG bias their estimate of theta downwards... Were such a position to be taken then, in my opinion, a compelling case can be made that the empirical evidence overwhelmingly supports the notion that the true value of theta lies between the SFG estimate of 0.23 and the Beggs and Skeels (2006) estimate of 0.57, and that in all probability it lies closer to 0.23 than 0.57.*[84]

546. Skeels therefore accepts that theta lies between 0.23 and 0.57 and that is more likely to be closer to 0.23. Even if the AER's assumed distribution rate of 100% is applied, the value of gamma would be 0.23, not 0.57.

547. The AER has largely dismissed the comments made by Skeels in its recent Draft Decision for ESTA Utilities, notwithstanding that Skeels is one of the co-authors of the single study that it continues to place sole reliance upon.[85] At a minimum, the SFG study casts significant doubt over the precision (and authority) that the AER is now applying to the Beggs and Skeels' estimate and the inherent uncertainty that prevails in relation to the 'true' value of theta. The SFG study was largely based on the methodology applied by Beggs and Skeels (with the 2009 version of the study specifically responding to methodological issues that had been identified by Skeels) however is based on a larger, more recent dataset. A simple extension of the data used by Beggs and Skeels (and applying the same method) produced a value of 0.37. Skeels has also agreed that the SFG estimate of 0.23 (which excluded 1% of the most influential observations in that sample) could be closer to that 'true' value.

548. The paper by Skeels is considered to provide significant and compelling evidence to question the AER's sole reliance on the conclusions from Beggs and Skeels 2006 study and its dismissal of SFG's extension of that study using updated data. At minimum, it also provides further support that SFG's estimate of theta of 0.23 should be included in the reasonable range of values. Hence, even if the AER's distribution rate of 100% was accepted (which GGT does not support), the value for gamma submitted by GGT (0.2) should be considered to be within reasonable bounds.

549. In its report, the Authority's consultant, Frontier Economics, highlighted further issues with the Beggs and Skeels (2006) study that were highlighted by SFG in its previous responses to the AER.[86] It was shown that the regression analysis used to generate the value of franking credits will also generate an estimated value for cash dividends. For the most recent period, that value was 80 cents in the dollar.

550. Frontier Economics highlights that under the standard CAPM it must be assumed that dividends are valued at their full face value (that is, one dollar). If Beggs and Skeels' 2006 results are recalculated assuming that each dollar of dividends was valued at one dollar (rather than 80 cents), the value of franking credits is close to zero.

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[84] ibid.

[85] Australian Energy Regulator (2009), Draft Decision, South Australia: Draft Distribution Determination 2010-2011 to 2014-15, November.

[86] Frontier Economics (2009), op.cit.

Upper bound for theta

551. The AER's upper bound is based on an analysis of taxation statistics undertaken by Handley and Mahesawaran (2008). In their analysis they estimate the proportion of redeemed franking credits to the total amount of franking credits that were distributed. GGT notes that the Authority has set its upper bound to equal the upper bound of the range produced by Handley and Mahesawaran, whereas the AER used the mid-point of their range.

552. Taxation statistics measure the quantum of corporate taxation, the amount of franking credits distributed and the amount of franking credits claimed. These statistics do not form the basis of an accepted method for valuing gamma. The statistics, such as the amount of franking credits claimed, do not value the credits. The statistics do not take into consideration the risk that shareholders bear in earning the dividends and credits. Therefore the statistics merely establish a hypothetical upper bound for theta. GGT considers that a study based on taxation statistics should not have been given such significant weight by the AER.

553. The Authority's consultant, Frontier Economics, is critical of the approach used by Handley and Mahesawaran. In particular Frontier Economics takes the view that the redemption rate of imputation credits does not provide information about their market value. In particular Frontier Economics conclude that redemption rates have no relevance to empirical estimates of the effect that franking credits have on the cost of capital of Australian firms[87].

554. While Synergies (Synergies Report pages 34 to 36 and Appendix C) does not endorse the use of tax statistics to value gamma for the reasons outlined above, it has undertaken its own analysis of published tax statistics. This study was submitted to the AER by Energex and Ergon Energy as part of their current regulatory review.

555. Using the available data from 2003 to 2007, Synergies study quantified the amount of the credits created, the amount distributed and the amount claimed by taxpayers. The analysis revealed that:

- if a payout ratio of 100% is applied (although this is not accepted), the maximum upper bound for gamma would be around 0.35; and
- if a payout ratio of 71% is applied (based on Hathaway and Officer's findings), the maximum upper bound for gamma would be 0.23.

556. These results differ markedly to the results of the Handley and Maheswaran study. As the data Handley and Maheswaran have used is not published in their study it is impossible to verify and reconcile it to other work. In particular Synergies (Synergies report page 36) has been unable to reconcile these differences as Handley and Maheswaran's data is not published.

557. The AER engaged Associate Professor Handley to review Synergies' study and his issues with the study are published in the recent Draft Decision in relation to Energex and Ergon Energy.[88] Synergies does not agree with all of the statements made by Handley. For example, claims are made in relation to double counting however given

[87] ibid., page 21.

[88] Australian Energy Regulator (2009), Draft Decision, Queensland: Draft Distribution Determination 2010-11 to 2014-15, November.

Synergies used net tax in its analysis (after adjusting for intercompany dividend distributions and offsets etc) it does not necessarily agree that this claim is valid. However, to the extent that this had occurred, it is possible to infer from the Australian Tax Office's statistics that this would be less than 2% and hence the impact on the results would be immaterial

558. Synergies does agree with the claim that its dataset is different to the dataset used by Handley and Maheswaran (Synergies report page 36). While it does not consider that the explanation made by Handley for the difference is plausible (particularly the double counting issue), access is needed to the dataset that was used in order to identify and understand the differences. Without this data, it cannot be confirmed that Handley and Maheswaran's analysis had addressed the criticisms made of Synergies' study.

559. While not endorsed as a method for valuing gamma, these Synergies results are similar to both the gamma value proposed by the GGT and lies within the gamma value range proposed by the Authority's adviser.

560. Hence, while the use of taxation statistics is not accepted as a method to value theta, to the extent that this method has been relied upon the results of Synergies' analysis casts considerable doubt on the evidence which has been relied upon by both the AER and (as a consequence of this) the Authority. This is considered of fundamental importance given the degree of reliance placed on the Handley and Maheswaran study by the AER. This study appeared to be integral in justifying the AER's increase in gamma from 50% to 65%. Similarly, through the AER decision, the study has influenced a material shift in the Authority's position on gamma.

Conclusions

561. In conclusion, GGT has fundamental concerns with the Authority's reliance on the AER's decision in relation to gamma given that some significant problems have been identified with each of the key assumptions that underpin its estimate. In particular the AER rejected other studies in favour of two single studies. The Handley and Maheswaran study cannot be used to estimate a value for theta due to its reliance on taxation statistics. In relation to the Beggs and Skeels study, one of the authors of that same study has subsequently acknowledged that if it is extended to include more recent data, the value of franking credits is more likely be closer than 0.23, than its estimate of 0.57.

562. Finally, GGT also notes that the report provided to the AER by its own consultant, Associate Professor Handley, concluded that a reasonable estimate for gamma is within the range of '0.3 to 0.7'[89]. This clearly does not support the Authority's range of 0.57 to 0.81 or indeed the AER's own conclusions.

563. More importantly, the Authority does not appear to have given any detailed consideration to the proposal submitted by GGT or the advice prepared by its own consultant. GGT's proposed value of 0.2 is seen to concur with the range specified by Frontier Economics (which was zero to 0.4). Frontier Economics states:

[89] J. Handley (2009), Further Comments on the Valuation of Imputation Credits, Report Prepared by the Australian Energy Regulator, 15 April, p.41.

> *Consequently, we consider the estimated value for imputation credits of 0.2 by GGT to be appropriate and that a reasonable range for this parameter, based on all of the evidence and analysis that is now available, is 0 to 0.4.*[90]

564. GGT submits that at minimum, there is clear justification for values below 0.5 being included within the bounds of what could be considered to be a reasonable range. The evidence supporting a value above 0.5 appears to be much more questionable.

565. Consequently GGT rejects the Authority's position, and consistent with the Authority's own consultant believes that gamma lies within the range 0 to 0.4. This is consistent with the initial GGT position that gamma was 0.2 and is also consistent with recent studies outlined above.

7.2.8 Gearing

566. The Authority has accepted GGT's proposed capital structure of 60% (debt to total assets).

7.2.9 Inflation

567. The Authority has accepted GGT's proposed forecast of inflation (which was 2.4%) however does not approve GGT's method of deriving this forecast. The key point of difference in the methods is the use of a geometric averaging (which the Authority proposes) and arithmetic averaging (which GGT proposes).

568. As outlined in the Synergies report (Synergies Report page 56), it is not generally accepted that geometric averaging is more 'accurate' than arithmetic averaging; the key question is which in the circumstances is the most appropriate method to use. Synergies (Synergies Report page 56) considers that an arithmetic average is more appropriate to use when forecasting inflation based on an average of annual forecasts for the next ten years. This is because each of these annual observations of inflation is considered independent.

569. GGT therefore considers that an arithmetic average is the more appropriate method to use in these circumstances. However, it also acknowledges that the impact on the inflation forecast is not material.

7.2.10 WACC range

570. In deriving a cost of capital GGT has applied the "*ranges approach*". The Draft Decision has stated that its task is to:

> *...consider whether the Rate of Return used for the derivation of Reference Tariffs…falls within the range of rates commensurate with the prevailing market conditions and the relevant risk' (paragraph 406).*

571. GGT considers this statement is consistent with the legal interpretation of the Code as ruled on by the Australian Competition Tribunal in Re GasNet Australia (Operations) Pty Ltd [2003] ACompT 6. The Draft Decision has further noted (paragraph 409) that:

> *[i]t is not the role of the Authority to ascribe a single value within the reasonable range of values for each parameter for which a reasonable range is determined. Rather, the Authority is required to determine a reasonable range of values for the Rate of Return as a whole*

[90] Frontier Economics (2009), op.cit., p.23.

572. This ranges approach was previously used by the Authority in the GGT Final Decision in 2005, and was described by the Authority as follows[91]:

> *The Authority accepts that its task is to consider whether the Rate of Return used for the derivation of Reference Tariffs in the revised Access Arrangement falls within the range of rates commensurate with the prevailing market conditions and the relevant risk. This Rate of Return will comply with the Code if the value used is within the range of values that different minds acting reasonably might attribute to the Rate of Return, applying the methodology of the CAPM that was chosen by GGT. In undertaking this task, the Authority has given consideration to the range of values within which the Rate of Return might be supported by reasonable minds as being commensurate with prevailing conditions in capital markets.*

573. and[92]

> *… the Authority is of the view that the range of values that would comply with the Code should not include the values that lie within the lower 10 percent or upper 10 percent of the range that may be derived by the application of the extremes of values for each of the parameters of the CAPM.*

574. GGT continues to accept the Authority's preference to truncate the lower and upper bounds of the cost of capital range by 10%.

575. The Authority is proposing to select a point estimate from the mid-point of the range. GGT had proposed an estimate from the upper bound, given:

(a) the inherent uncertainty associated with WACC estimation generally;

(b) the uncertainty associated with WACC estimation of the GGP at the current time, in particular:

- the global financial crisis generally and in particular its impact on:
    - Uncertainty in measuring debt margins due to a lack of clear information; and
    - Uncertainty in measuring the MRP.
- the GGP's relatively unique risk profile among Australian infrastructure assets that are subject to full regulation. In particular the current circumstances facing the GGT mean that there are uncertainties relating to:
- volume risk issues arising from certain contractual provisions that could see volumes reduced prior to the expiry of the contract ;
- counterparty risk issues arising from the absence of parent company guarantees as outlined in section 3;
- specific regulatory risks including that in the event that the Draft Decision's proposed position to reject GGT's compensation for asymmetric risk is implemented (see section 4.5) then this will act as a further cap on GGT's return upside and consequently increases the asymmetric nature of GGT returns

[91] Economic Regulation Authority (2005), Final Decision on the Proposed Access Arrangement for the Goldfields Gas Pipeline page 63, paragraph 282.

[92] ibid., page 65, paragraph 288.

(c) the generally unequal consequences of error. In particular it is generally recognised that the economic impact of under-investment in infrastructure has a larger negative effect than over-investment in infrastructure. Thus the cost of capital should be set to minimise the likelihood of under-investment; and

(d) GGP is subject to a price cap whereas many of its regulated counterparts in the energy sector are subject to revenue caps.

576. GGT considers that due regard needs to be given to the unequal consequences of error, particularly given the tight conditions in the global capital markets and the difficulties that it faces in raising funds. As outlined previously, a submission previously made to the Authority by the Financial Investors Group seriously questions the ability of regulated utilities to raise equity capital based on the regulated cost of equity. This in turn could have significant implications for investment in pipeline infrastructure going forward.

577. Again, other than stating that it proposes to select an estimate from the middle of its range, the Authority did not specifically respond to GGT's proposal on this issue.

7.3 WACC Values

578. The values of the parameters put forward in the sections above (including ranges), are shown below. GGT has refined and updated some parameters previously put forward, such as MRP and equity beta, to take into account comments made by the Authority's consultant. The most material change to GGT's proposal is a reduction in the upper bound of the equity beta range from 1.8 to 1.4.

579. On other parameters such as gamma and credit rating (and consequently cost of debt), GGT believes the Authority's approach and reasoning are incorrect and has provided more information to support and refine GGT's original position.

580. GGP believes the cost of capital parameters in the table below fall within the range of values commensurate with the prevailing market conditions and the relevant risk.

Table 7-1 WACC parameters

CAPM Parameter	High	Low
Nominal Risk Free Rate	5.37%	5.37%
Inflation Rate	2.40%	2.40%
Credit rating	BBB-	BBB
Cost of Debt Margin over Risk Free Rate	4.58%	4.38%
Cost of raising debt	0.75%	0.75%
Market Risk Premium	7.00%	6.00%
Corporate Tax Rate	30%	30%
Gamma	0%	40%
LT Proportion of Equity Funding	40%	40%
LT Proportion of Debt Funding	60%	60%
Equity Beta	1.4	1.0

581. The cost of capital calculated values are shown below. The table below shows the shows the range of Rate of Return values derived from the parameters.

Table 7-2 WACC Ranges

Cost of Capital Measure	High	Low
Nominal Cost of Equity	15.17%	11.37%
Pre-Tax Nominal WACC	15.09%	11.85%
Pre-Tax Real WACC	12.39%	9.22%

582. From the table above GGT considers a pre-tax nominal WACC in the range 15.1 % to 11.9% to be reasonable. Truncating this, as per the Authority process outlined above, gives a revised range of 14.8% to 12.2%.

583. Within this range a pre tax nominal WACC of 13.5% is near the mid point. This is the value that was proposed in GGT's original draft Access Arrangement. This is considered largely coincidental.

584. A materially lower upper bound for the equity beta has been provided in this revised proposal. However, the effect of this has been offset by material increases in the risk-free rate and debt margin, which are essentially market-driven. If GGT had made no changes to its original proposal apart from updating it for more recent market rates, the WACC would have been significantly higher than what is proposed here.

585. As indicated in section 7.2.10 above a value from the higher end of the truncated range should be used as cost of capital estimation is imprecise, and the probability of estimating a cost of capital different from the 'true' cost of capital is high. If such a regulatory error resulted in prices being set too low, the resulting under-investment is worse from an economic and social perspective than if prices are set too high.

586. The pre tax real WACC range truncated, as per the Authority process, is 14.8% to 12.23%. Within this range a pre tax nominal WACC of 14.3% has been used as the cost of capital parameter in determining Reference Tariffs.

587. GGT believes the cost of capital range and cost of capital parameter value selected are consistent with the Reference Tariff principles, and that the Cost of Capital parameter selected falls within the range of rates commensurate with the prevailing market conditions and the relevant risk.

588. Thus GGT does not accept Amendments 8 and 9 of the Draft Decision which require that in relation to Rate of Return, Table 8 of the Access Arrangement Information should be amended to reflect the values in Table 15 of this Draft Decision and GGT's Proposed Revisions should be amended to adopt a nominal pre-tax Rate of Return of 10.28%.

589. Using reasonable parameter values GGT derives a pre-tax nominal WACC in the range 15.1 % to 11.9%. Within this range a pre tax nominal WACC of 14.3% has been used.

8 Services Policy and Cost Allocation

590. This section addresses Amendments 1, 13 and, at a secondary level, Amendment 14.

Amendment 1

> *Section 4.2(a) of GGT's Proposed Revisions should be amended to replace the words "will consider the development of" with the words "will offer".*

GGT Response:

591. GGT accepts the Amendment in principle and is working with the Authority to further refine the wording.

592. Amendment 14 requires the costs associated with the uncovered compressors to be included in the Reference Service Revenue. This matter is discussed in Section 2 above and is not repeated here.

593. Amendment 13 addresses the allocation of costs among Services to derive the Reference Service Revenue.

594. This section clarifies the Services provided by the Covered Pipeline and the appropriate assignment and allocation of costs to those Services according to the provisions of Code Section 8.38.

8.1 Clarification on Services Policy

595. The Draft Decision acknowledges that a Service was defined by its suite of characteristics, as outlined below:

> *78. The Authority accepts GGT's submission that a Service is defined by its "suite of service characteristics" and that the Services Policy must include a description of the Firm Service by reference to those characteristics.*

596. The Draft Decision then devotes considerable attention to the concept of the Firm Service. GGT's position is that "firmness" is just one of the service characteristics in the "suite of service characteristics" that constitute the definition of a service.

597. The "firmness" of the service is only one characteristic of the Reference Service, along with characteristics such as the forward haul nature of the service, the capacity-based nature of the service and the scope for a supplementary quantity option.

598. GGT's position is that it is the case that the Reference Service is a firm service rather than that a firm service is the Reference Service. This distinction should not impact the Draft Decision's approval of the Services Policy but may assist in delineating the Reference Service from Negotiated Services.

8.1.1 Service characteristics

599. Each service includes a defined set of characteristics that specify the rights, responsibilities and risk sharing associated with that service.

600. GGT submits that "firmness" is not a sufficient characteristic to define a service – it is but one characteristic of a service which specifies the scope for service interruption at the discretion of the pipeline operator. Other defining service characteristics include:

- Pricing and tariff structures
  The nature of the charging structure can define a markedly different service and drive markedly different behaviour on the part of the pipeliner and the shipper.

For example, a service whose pricing is dominated by a capacity reservation charge differs from a service with a throughput-only tariff.

- Inlet and outlet points (injection, withdrawal) including related capex requirements the flexibility of inlet and outlet point scheduling may differ between services. Some services may have specific requirements that certain inlet and outlet points be used, whereas other services could allow shippers to withdraw from numerous outlet points at their discretion. More specifically where suitable inlet points or outlet points don't exist to meet a shippers needs, negotiations are required to create a new inlet or outlet point. The nature of the negotiations and the method of recovering the related capital costs (for example contribution or surcharge) may act to delineate different services.
- Balancing requirements
  Scope for flexibility in, or requirements for accuracy in, nominations and intra day and inter day imbalances may act to delineate different services.
- Similarly differences in storage allowances, overrun treatment and charging also act to delineate different services.
- Contract term
  A short term contract (say, 3 months) is quite a different service characteristic when compared to a long term (20 year plus) contract.
- Revenue sharing mechanisms
  There exist in some contracts, clauses which require a change in tariff if an additional shipper uses the system (this approach usually applies on a pipeline or lateral which was originally constructed to serve one or two end users). These contracts may also provide for a refund of capital contributions in some circumstances. As such the existence of revenue sharing mechanisms and refund mechanisms may act to delineate different services.
- Scope to provide out-of-specification gas
  The gas specification is included in the standard contract. However, if a shipper wishes to transport a quantity of gas that falls outside this specification, this can constitute a different sharing of risks and responsibilities.

601. In summary, GGT submits that there are numerous characteristics which act together to define different "services".

602. With regard to the Draft Decision's findings at paragraphs 81 through 85, GGT's position is that it is not the case that the Firm Service is the Reference Service, but rather that the Reference Service proposed by GGT is a Service which includes "firmness" as one of its characteristics.

603. While the Reference Service is a firm service *"which is likely to be sought by a significant part of the market"*, it includes other important characteristics as described in the Services Policy and the referenced clauses 4 and 8 of the General Terms and Conditions.

8.2 Negotiated and Pre-Contracted Services

604. The Draft Decision has acknowledged the difference between Reference and Negotiated Services by accepting that a service is defined by suite of service characteristics (para 78 above).

605. Consistent with its findings in respect of the DBNGP[93], the Draft Decision clearly states that the Authority considers services contracted before the Access Arrangement period to be Negotiated Services. Therefore, the Draft Decision acknowledges that a Negotiated Service is a different Service from the Reference Service, as outlined below:

> *92. The Services Policy under the Code does not define pre-contracted Services as Non-Reference Services. However, the Authority considers that pre-contracted services, where such services have terms and conditions (including price) which differ from a Reference Service, are Negotiated Services.*

606. However, this is inconsistent with the Draft Decision's statement on the definition of a Service as outlined below:

> *78. The Authority accepts GGT's submission that a Service is defined by its "suite of service characteristics" and that the Services Policy must include a description of the Firm Service by reference to those characteristics. The Authority does not, however, accept GGT's further submission that "the price and terms and conditions that are included in the Access Arrangement" also form part of the description of a Service for the purpose of the Services Policy.*

607. Paragraphs 78 and 92 are at odds with each other on the extent to which differences in the suite of service characteristics, and the terms and conditions of a service (including price) define different services.

608. GGT has clearly stated in its Services Policy (section 4 of the proposed Revised Access Arrangement) that:

- 4.1(a) The Reference Service is a firm Service;
- 4.1(a) The term of contract for the Reference Service is 12 months or more;
- 4.1(a),(b) The Reference Service is more completely described in clauses 4 and 8 of the General Terms and Conditions;
- 4.3(a) a request for a Service which differs from the Reference Service will be treated as a request for a Negotiated Service, with tariffs and other terms and conditions for such a Negotiated Service to be negotiated.

609. In summary, GGT maintains that the Reference Service is clearly defined in the proposed Revised Access Arrangement as the Service defined by the General Terms and Conditions forming part of the proposed Revised Access Arrangement. Any Service whose terms and conditions (including price) differ from a Reference Service, are by definition and necessity Negotiated Services.

610. The distinction between Reference and Negotiated Services is the key to the development of Reference Tariffs in the proposed allocation of regulatory costs in the proposed Revised Access Arrangement. Code Section 8.38 requires that the Reference Tariff should be designed to recover all of the costs directly attributable to the Reference Service and a reasonable share of the costs incurred providing the Reference Service jointly with other Services

[93] Revised Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline – Economic Regulation Authority, 15 December 2005

611. GGT submits that its proposed cost allocation process falls squarely within the requirements of Section 8.38 of the Code.

8.3 Allocating Costs to Reference Services

612. Amendment 14 requires:

> *The Reference Service Revenue referred to at page 13 of the Access Arrangement Information should be amended from $15.9 million to $367.1 million.*

613. As discussed in paragraph 740 of the Draft Decision, Amendment 14 hinges of the notion that the Services provided by the Covered Pipeline include the services provided by the additional capacity produced by the uncovered compressors. As discussed above in section 2, GGT does not accept this finding.

614. The following discussion does not address the issue of allocation of costs (regulatory costs in particular) to uncovered capacity. This will be consequential on the conclusion on whether the expanded capacity is "part of the Covered Pipeline for any purposes under the Code" according to Section 3.16(a)(ii).

8.3.1 Causal Attribution of Regulatory Costs

615. The Draft Decision concludes that all shippers should bear a proportionate share of all costs:

> *746. In determining Reference Tariffs, costs should be allocated equally, across all Capacity (whether or not excluded from Coverage) with no regard to the actual contracts in place for this Capacity, and whether based on the Reference Service or other Services.*

616. However, this violates the first requirement of Section 8.38 of the Code, which requires that the cost allocation be undertaken such that "*to the extent commercially and technically reasonable … all of the Total Revenue that reflects costs incurred … that are directly attributable to the Reference Service*."

617. The Draft Decision's arbitrary "*smearing*" of regulatory costs (some of which are directly attributable to the Reference Service) imposes costs on shippers who do not cause them to be incurred, and who derive no benefit from them. GGT maintains that its assignment of regulatory costs across volumes contracted since the regulatory framework came into place is a "*commercially reasonable*" approach to allocating these costs according to the requirements of Section 8.38 of the Code.

618. One of the apparent concerns in the Draft Decision appears to be that regulatory costs attributable to pre-Code contracts would be allocated to the Reference Service:

> *734. Under GGT's approach the Total Revenue so defined is then allocated as follows: …*
>
> *b) regulatory costs are to be allocated between the Reference Services and the Contracted Capacity signed since the Code commenced (so that regulatory costs in relation to pre-Code contracts fall on the Reference Service and post-Code Contracts).*

619. As stated in Section 6.3 of GGT's April 2009 submission in support of its proposed Access Arrangement revisions, GGT submits that there are no regulatory costs incurred in relation to pre-Code contracts. The relationship between GGT and these "*pre-Code*" shippers is governed exclusively by the relevant Gas Transportation Agreement, and not by any provisions of the Code. Moreover, those contracts were

negotiated before the protections of the National Gas Access framework came into force; no regulatory costs are incurred that are relevant to these contracts. Similarly, there are no regulatory costs incurred in relation to contracts to provide services using uncovered capacity.

620. Section 8.1(a) of the Code provides that the Reference Tariff should be developed with a view to "*providing the Service Provider with the opportunity to earn a stream of revenue that recovers the efficient costs of delivering the Reference Service*." GGT submits that gas transportation agreements signed before the regulatory framework was introduced would not be expected to include provision for recovery of regulatory costs; it would not be possible for GGT to recover the regulatory costs assigned to these volumes. Were the Regulator to assign regulatory costs to these volumes, it would not be "*providing the Service Provider with the opportunity to earn a stream of revenue that recovers the efficient costs of delivering the Reference Service.*"

8.3.2 Capacity over which regulatory costs are to be attributed

Allocation of costs over non-covered capacity

621. The Draft Decision (see paragraphs 735, 736, 740 and 748) includes a requirement to allocate costs over all capacity, including the non-covered expanded capacity.

622. As discussed above in section 2, GGT does not agree with the Draft Decision's assessment that the capacity associated with the expansions should be included as part of the Covered Pipeline for any purposes under the Code. This discussion is not repeated here.

Allocation of regulatory costs over available capacity

623. The Draft Decision correctly identified that Sections 3.1 and 3.2 of the Code relate to the Services "*to be offered*" and the Services that the Service Provider "*will make available*":

> *94. Under Section 3.1 of the Code an Access Arrangement must include a Services Policy on the Services "to be offered". Section 3.2(a) of the Code then requires the Access Arrangement to include a description of one or more Services that the Service Provider "will make available".*

624. The Draft Decision appears to be concerned that the regulatory costs attributable to the Reference Service is attributed to the available capacity to provide the Reference Service.

625. Under Section 3.2 of the Code, the Reference Service is the Service GGT "will make available". Consistent with the arbitration requirements in Code Section 6.8(a) or 6.13, GGT is obliged to make that Service available on demand so long as capacity exists to provide it.

626. As discussed above, the Reference Service is a Service to be provided on a firm basis. GGT is only able to make this Service available to the extent of the available capacity on the pipeline, which is currently 4TJ/day. This drives the allocation of regulatory costs as discussed in section 3.6 of the April 2009 GGT supporting submission.

627. GGT submits that attributing regulatory costs to the capacity available to provide the Reference Service will generate a Reference Tariff that will recover, "*to the maximum extent that is commercially and technically reasonable, … all of the Total Revenue that reflects costs incurred (including capital costs) that are directly attributable to the Reference Service*."

8.4 Summary

628. The Draft Decision required all costs, including regulatory costs, to be "*smeared*" across all capacity (including non-covered capacity), having no regard to the different Services provided or contracts in place:

> *741. The Authority's past practice is that costs are allocated equally, across all modelled Capacity with no regard to the actual contracts in place for this Capacity, whether based on the Reference Service or other Services.*
>
> *746. In determining Reference Tariffs, costs should be allocated equally, across all Capacity (whether or not excluded from Coverage) with no regard to the actual contracts in place for this Capacity, and whether based on the Reference Service or other Services.*

629. This conclusion contradicts:

- the Draft Decision's finding that the Services are different, as discussed above; and
- the Code requirement for the Service Provider to provide the Reference Service on demand, and the capacity available to provide that Service.

630. GGT maintains that its allocation of regulatory costs is consistent with Section 8.38 of the Code, in that:

- Under Section 3.16(a)(ii), the expanded capacity is not to be considered as part of the Covered Pipeline for any purposes under the Code;
- The capacity of the Covered Pipeline available to provide the Reference Service is approximately 4 TJ/day;
- There are no regulatory costs attributable to those contracts signed before the Code came into force, nor those contracts served by the (non-covered) expanded capacity.

631. Considering the contradictory nature of the Draft Decision conclusions and the fact that GGTs allocation of regulatory costs is consistent with the Code GGT Does not accept Amendments 13 and 14.

8.5 Calculating Total Revenue and Reference Tariffs over Capacity Available For Reference Services

8.5.1 Total Revenue Applicable to the Reference Service

632. Amendment 16 relates to the forecast annual revenue being calculated over the entire capacity of the (covered and non-covered) pipeline rather than the capacity available for the Reference Service. To the extent this amendment relates to, or is affected by the question of the proper treatment of the Expansions of Capacity, this is addressed in section 2 of this submission.

633. Code Section 8.2(b) requires that:

> *(b) to the extent that the Covered Pipeline is used to provide a number of Services, that portion of Total Revenue that a Reference Tariff is designed to recover (which may be based upon forecasts) is calculated consistently with the principles contained in this Section 8;*

634. The Draft Decision (paragraph 92) confirmed that the Covered Pipeline is used to provide a number of Services, notably Reference Services and Negotiated Services.

As discussed above in section 8.3, GGT calculated the amount of the Total Revenue attributable to Reference Services and other Services in a manner consistent with the requirements of Code Section 8.38.

635. Section 8.38 is unambiguous in that it requires:

> *…the portion of the Total Revenue … that a Reference Tariff should be designed to recover … should include:*
>
> *(a) all of the Total Revenue that reflects costs incurred (including capital costs) that are directly attributable to the Reference Service; and*
>
> *(b) a share of the Total Revenue that reflects costs incurred (including capital costs) that are attributable to providing the Reference Service jointly with other Services, with this share to be determined in accordance with a methodology that meets the objectives in Section 8.1 and is otherwise fair and reasonable.*

636. GGT has complied expressly with the requirements of Section 8.38 in calculating the portion of Total Revenue that the Reference Tariff is designed to recover.

637. GGT has, however, updated its forecasts of capital and operating costs, as discussed elsewhere in this submission. GGT therefore proposes that the amount of Total Revenue attributable to Reference Services is as shown in Table 8-1 below:

Table 8-1: Annual Reference Service Revenue ($m, nominal)

	2010	2011	2012	2013	2014
Revenue	**4.90**	**4.20**	**4.20**	**5.0**	**5.7**

638. The present value of the Reference Service Revenue (using a discount rate equal to a pre-tax nominal Rate of Return of 14.3%) is $16.1million at 31 December 2009.

8.5.2 Calculating Reference Tariffs over Capacity Available For Reference Services

639. Amendment 15 relates to calculating tariffs over the entire capacity rather than that available for the Reference Service

640. To the extent this amendment relates to, or is affected by the question of the proper treatment of the Expansions of Capacity, this is addressed in section 2 of this submission.

641. Code Section 8.2(c) requires that:

> *(c) a Reference Tariff (which may be based upon forecasts) is designed so that the portion of Total Revenue to be recovered from a Reference Service (referred to in paragraph (b)) is recovered from the Users of that Reference Service consistently with the principles contained in this section 8;*

642. As discussed above in section 8.3, GGT has calculated the amount of the Total Revenue attributable to the Reference Service in accordance with the provisions of Code Sections 8.2 and 8.38.

643. The Reference Tariff is derived so that the present value of the Total Revenue attributed to the Reference Service equals the present value of the forecast annual revenue to be recovered from providing the Reference Service. The annual forecast revenue amounts are shown in Table 8-2.

Table 8-2: Annual Revenue from Reference Tariff ($m, nominal)

	2010	2011	2012	2013	2014
Revenue	**4.3**	**4.4**	**4.5**	**4.6**	**4.7**

644. The present value of this revenue stream, obtained by applying the Reference Tariff, adjusted quarterly to reflect movements in expected inflation, to the forecast volumes for the Reference Service, and applying a discount rate equal to a pre-tax nominal Rate of Return of 14.3%, is $16.1 million.

645. GGT considers that it has demonstrated that the Reference Tariff has been set in such a way as to recover the Reference Service Revenue in present value terms. In this regard, GGT des not accept Amendments 15 and 16.

8.6 Tariff Adjustment Mechanism

646. The Draft Decision largely approves the proposed Tariff Adjustment Mechanism (as amended in the response to the Issues Paper), save for the proposed adjustment for inflation. The position of the Draft Decision is outlined in paragraphs 818 and 819.

647. The Draft Decision rejected the CPI indexation by discussing the expected profile of Reference Tariffs over the Access Arrangement period. However, the Draft Decision has reached a confused conclusion on this issue of CPI indexation. This confusion may arise due to an incorrect conclusion on uncovered capacity and non capital costs by the Authority and the resulting impact on the derivation of the Reference Tariff path. It is clear from the discussion from paragraph 801 (relating to the impact of the Authority's Draft Decisions affecting the level of the Reference Tariff) that the Draft Decision's assessment of the impacts of step changes is heavily influenced by the conclusions reached on other matters, notably the inclusion of the uncovered capacity in calculating the Total Revenue and the Reference Tariffs.

648. Matters affecting the *level* of the Reference Tariff line are discussed elsewhere in this submission. This section, discussing the Reference Tariff Adjustment Mechanism, addresses the escalation of tariffs over the Access Arrangement period (ie the *slope* or rate of change of the tariff progression over the Access Arrangement period).

8.6.1 Step Changes

649. GGT accepts the general finding in Draft Decision paragraph 799 that, where there is a discontinuity between the current and future tariff levels,

> *it is not possible to design a Price Path which avoids step changes at both the start and end of the Access Arrangement Period. It is possible however, to avoid a step change at either the start or end of the period.*

650. But GGT challenges the premise underlying paragraph 799 that the Total Revenue Requirement and Reference Tariffs at the start of the 2015-19 AA period will be less than forecast at the end of the 2010-14 period. This suggests a degree of pre-judgement on the part of the Regulator. It is possible that there will be an increase in tariffs at the next period, particularly if the next tranche of capacity expansion is achieved by looping.

651. GGT agrees with the Authority that it is sensible to act towards *"minimising the disruptive effect of step changes to the Reference Tariff, over future years*" (paragraph

800). GGT is concerned that the flat nominal tariff path will result in a significant downwards step change in 2010 and another significant step change upwards in 2015, indeed in the opposite direction to the current step change.

652. GGT's proposal to escalate tariffs by CPI aims to reduce this future step change to the greatest extent possible while continuing to act in accordance with the Code. GGT therefore considers that its proposed Tariff Escalation Method presents a reasonable balancing of the Code's objectives in Section 8.1.

8.6.2 Price Signals

653. The Draft Decision's rejection of CPI indexation of the Reference Tariff (Amendment 17) has implications for the price signals being sent to Prospective Users.

654. Section 8.1 of the Code requires the Reference Tariff to be designed with a view to achieving, among others, the objective of

> *(d) not distorting investment decisions in Pipeline transportation systems or in upstream and downstream industries.*

655. GGT submits that it is important for the Reference Tariff to send the correct price signals about the future costs of gas transportation services. Incorrect price signals, such as prices which do not reflect costs, may create inappropriate incentives for Users and Potential Users. Thus an artificially low price, that does not signal the potential costs of future pipeline expansions, could distort investment decisions in downstream industries by understating the forecast costs of future production.

656. Recognising that the pipeline is becoming closer to being fully compressed, future expansions are likely to be achieved through looping. An artificially low tariff is also likely to distort pipeline investment decisions, and would almost certainly have a chilling effect on investment.

657. These incorrect price signals for pipeline investment would be exacerbated by inappropriate price signals which encourage expansion in downstream industries. In this case, there would be a widening divergence of supply and demand for pipeline services.

658. GGT's cost allocation methodology adopts the approach which sends appropriate price signals to Prospective Users on the future costs of service as looping becomes the required form of capacity expansion.

659. The future price signals are at the core of GGT's proposal to index the Reference Tariff over the AA period. In GGT's view, the Reference Tariff, as indexed, will provide a more meaningful signal to the future shippers about the future costs of capacity expansion.

660. In summary, GGT submits that its cost allocation methodology and Reference Tariff price path are consistent with the Reference Tariff Principles in Section 8.1 of the Code

8.6.3 GGT's legitimate business interests

661. More directly relating to Amendment 17, GGT is concerned that, in refusing to accept the CPI indexation component of the proposed Tariff Adjustment Mechanism, the Authority did not give due consideration to GGT's legitimate business interests, as required under Section 2.24(a) of the Code.

662. GGT notes that the ACT decision on MAPS acknowledges a need for the Regulator to consider the Service Provider's legitimate business interests in terms of the level of the

tariffs when contracts come up for renewal.[94] The ACT found, in summary, that the ACCC did not consider the Service Provider's legitimate business interests in the effect a low Reference Tariff would have on negotiations when contracts expired at the end of the AA period.

663. The GGT circumstances are similar to those at MAPS, in that:

- Many of the pipeline Services are provided as Negotiated Services, such that changes in the Reference Tariff will not affect the revenue derived from these shippers; and
- Some existing Gas Transportation Agreements are due for renewal towards the end of this Access Arrangement period.

664. GGT submits that Draft Decision did not consider GGT's legitimate business interests in rejecting GGT's proposal to index Reference Tariffs by CPI.

665. In summary, GGT submits that its Tariff Adjustment Mechanism, as amended in its July 2009 submission, is Code compliant GGT therefore does not accept the CPI indexation component of Amendment 17.

[94] Re Epic Energy South Australia Pty Ltd [2003] ACompT 5 (10 December 2003) Paragraphs 118 to 120

9 Quarterly Modelling

9.1 Draft Submission – Modelling Approach

666. At paragraph 222 of the Draft Decision, the Authority has refused to approve GGT's proposal that the Reference Tariff be modelled on an annual basis. GGT notes that this is not a "Amendment", but does impact many areas of the proposed revised Access Arrangement. These are referred to as "consequential amendments".

667. GGT submits that the justification provided for this amendment is flawed as it is based upon a misunderstanding of relevant provisions of the Code and is unreasonable in all the circumstances.

9.2 Introduction

668. When the current Access Arrangement was first approved, the Initial Capital Base (ICB) was set after consideration of a number of values, as required by Section 8.10. One of those values was the economic depreciated value for the GGP, calculated applying quarterly modelling. The value for the ICB finally determined was equivalent to that economic depreciated value.[95]

669. GGT contends that annual modelling should be applied to the determination of the Reference Tariffs under the Revised Access Arrangement. The use of annual modelling would bring the GGP in line with all other regulated tariffs in gas and other industries (paragraph 213.)

670. The Draft Decision requires that GGT continue to apply quarterly modelling over the life of the Covered Pipeline for assets installed in the period up to 31 December 1999. At paragraph 223, the Authority states that adjustments to GGT's Proposed Revisions are required as a consequence of the decision to require quarterly modelling.

9.3 Reasons for the Draft Decision

671. The consequential amendments are based on the considerations set out in paragraphs 200 to 223 of the Draft Decision. The Authority's conclusions and reasoning are summarised as follows:

- Quarterly modelling has been applied to the GGP since the setting of the ICB under the first Access Arrangement;
- While the application of quarterly modelling is the exception to the general rule in that all other Australian regulators in gas and other industries apply annual modelling, a change to annual modelling as proposed by GGT would result in GGT being able to recover more than its initial investment over the life of the Covered Pipeline assets.
- Such a gain could not be offset by a retrospective adjustment to the Capital Base.
- As a result, in order to meet the objectives under Section 3.4 and Section 8.1(a) of the Code, GGT is required to continue to apply quarterly modelling over the life of the Covered Pipeline assets installed in the period up to 31 December 1999.

[95] See Final Decision on the Proposed Access Arrangement for the Goldfields Gas Pipeline Submitted by Goldfields Gas Transmission Pty Ltd - Economic Regulation Authority 17 May 2005 from paragraph 95.

9.4 Summary of submissions

672. The Draft Decision asserts that GGT "would obtain a gain at the expense of the Users" (paragraph 219) but has provided no supporting information for this assertion.

673. The conclusion that quarterly modelling is to be continued to be applied over the life of the Covered Pipeline assets installed in the period up to 31 December 1999 is incorrect and not supported by the Code because:

- the Code does not establish a regime where, over the life of the asset, the initial investment is recovered for pipelines that existed when the Code was implemented. Instead Section 8.10 of the Code requires the regulator consider a number of different valuation methodologies and issues in determining the ICB, and Section 8.11 puts an upper and lower limit on the normal outcomes of the process. Neither of these sections is consistent with the underlying position in the Draft Decision that Reference Tariffs are to be struck so that the initial investment is recovered over the life of the asset.
- It does not give effect to Section 8.4; and
- the Authority has not considered the legitimate business interests of the GGT.

9.4.1 Unsupported assertion

674. GGT submits that the Draft Decision makes a critical unsupported assertion on the impact of a change from quarterly to annual modelling. The Draft Decision provides no support for its assertion that GGT would recover more that its original investment (paragraph 215) and obtain a gain at the expense of Users (paragraph 219). The Draft Decision includes no supporting analysis in support of these assertions.

675. GGT has long challenged the Authority's view that a change from quarterly to annual modelling would result in any benefit to GGT or any detriment to Users.

676. GGT has, over recent years, provided the Authority with extensive correspondence, financial analysis and consultant reports to demonstrate that GGT's proposed approach is sound. For completeness, the collection of this correspondence and financial modelling is attached to this submission.

9.4.2 Provisions of the Code

677. The following relevant provisions of the Code are repeated for convenience.

678. Section 3.4 states:

> *Unless a Reference Tariff has been determined through a competitive tender process as outlined in Section 3.21 to 3.26, an Access Arrangement and any Reference Tariff included in an Access Arrangement must, in the Relevant Regulator's opinion, comply with the Reference Tariff Principles described in Section 8.*

679. The preamble to Section 8.1 of the Code states:

> *The Reference Tariff Principles are designed to ensure that certain key principles are reflected in the Reference Tariff Policy and in the calculation of all Reference Tariffs. Within these parameters, the Reference Tariff Principles are designed to provide a high degree of flexibility so that the Reference Tariff Policy can be designed to meet the specific needs of each pipeline system. The overarching requirement is that when Reference Tariffs*

are determined and reviewed, they should be based on the efficient cost (or anticipated efficient cost) of providing the Reference Services.

680. Section 8.1 provides:

A Reference Tariff and Reference Tariff Policy should be designed with a view to achieving the following objectives:

(a) providing the Service Provider with the opportunity to earn a stream of revenue that recovers the efficient costs of delivering the Reference Service over the expected life of the assets used in delivering that Service;

(b) replicating the outcome of a competitive market;

(c) ensuring the safe and reliable operation of the Pipeline;

(d) not distorting investment decisions in Pipeline transportation systems or in upstream and downstream industries;

(e) efficiency in the level and structure of the Reference Tariff; and

(f) providing an incentive to the Service Provider to reduce costs and to develop the market for Reference and other Services.

To the extent that any of these objectives conflict in their application to a particular Reference Tariff determination, the Relevant Regulator may determine the manner in which they can best be reconciled or which of them should prevail."

681. Section 8.8 provides that:

Principles for establishing the Capital Base for the Covered Pipeline when a Reference Tariff is first proposed for a Reference Service (ie, for the first Access Arrangement Period) are set out in Sections 8.10 to 8.14.

682. Section 8.10 provides that:

When a Reference Tariff is first proposed for a Reference Service provided by a Covered Pipeline that was in existence at the commencement of the Code, the following factors should be considered in establishing the initial Capital Base for that Pipeline:

(f) the basis on which Tariffs have been (or appear to have been) set in the past, the economic depreciation of the Covered Pipeline, and the historical returns to the Service Provider from the Covered Pipeline;…

683. Section 8.11 provides that:

The initial Capital Base for Covered Pipelines that were in existence at the commencement of the Code normally should not fall outside the range of values determined under paragraphs (a) and (b) of Section 8.10.

9.5 Discussion

9.5.1 Establishing Total Revenue

684. Section 8.2(a) of the Code requires that the Regulator is to be satisfied in determining a Reference Tariff that the Total Revenue is established consistently with one of the methodologies referred to in Section 8.

685. GGT has adopted the Cost of Service approach as permitted under Section 8.4. The Cost of Service methodology is described in Section 8.4 as follows:

> ***Cost of Service:*** *The Total Revenue is equal to the cost of providing all Services (some of which may be the forecast of such costs), and with this cost to be calculated on the basis of:*
>
> *(a) a return (**Rate of Return**) on the value of the capital assets that form the Covered Pipeline or are otherwise used to provide Services (**Capital Base**);*
>
> *(b) depreciation of the Capital Base (**Depreciation**); and*
>
> *(c) the operating, maintenance and other non capital costs incurred in providing all Services (**Non capital Costs**)."*

686. It is an error to assume that because the Capital Base is an input into the determination of Total Revenue, then a modelling approach which was used to derive one of the values considered in setting the ICB under Section 8.10 must continue to be used in the separate exercise of setting Reference Tariffs into the future.

687. The focus under Sections 8.1 and 8.2 is forward-looking, with the objective of ensuring that Reference Tariffs are set so as to enable recovery of the Capital Base, non capital costs, and the appropriate cost of capital. This is a discrete process, and considerations that may have informed decisions in setting the ICB under Section 8.10 are no longer relevant. The Authority's statement in paragraph 215 that approval of annual modelling means that 'GGT will recover more overall in present value terms than the initial investment' indicates that it is applying an incorrect test to the issue. The correct test is whether, over the remaining economic life of the assets forming the Capital Base, GGT will recover the value of the Capital Base and the Rate of Return on that value.

9.6 Misunderstanding of Code regarding recovery of initial investment

688. The Draft Decision proceeds on the incorrect assumption that the Code requires that over the life of the Covered Pipeline assets, 'overall recovery from Reference Tariffs in present value terms will equal the initial investment' (paragraphs 215 and 216.) However, the Code does not establish a regime where over the life of the asset the initial investment is recovered for pipelines that existed when the Code was implemented. If this were the case, then there would be no need for Sections 8.8 to 8.14 of the Code -- the Code would have merely provided that the ICB of a Covered Pipeline was to be set at the depreciated value of the initial investment at the relevant point in time. Instead Section 8.10 of the Code requires the regulator consider a number of different valuation methodologies and issues in determining the ICB, and Section 8.11 puts an upper and lower limit on the normal outcomes of the process. Neither of these sections is consistent with the underlying position in the Draft Decision that Reference Tariffs are to be struck so that the initial investment is recovered over the life of the asset.

689. In contrast, Section 8.12 provides that the Capital Base for Covered Pipelines developed after the commencement of the Code are to be set to reflect the capital costs incurred in the development of that new pipeline.

690. The only correct conclusion therefore is that it is clearly within the contemplation of the drafters of the Code that the ICB for an existing pipeline will diverge from the value of the unrecovered initial investment in the pipeline GGT submits that it is incorrect and erroneous to consider that the Code has as an objective the recovery by the Service Provider of only the initial investment over the life of the pipeline..

691. The wide range of Initial Capital Base values determined for the numerous gas transmission pipelines and distribution networks which have been regulated since the Code commenced clearly supports this.

692. Further, the Code requires that the Capital Base be depreciated over the remaining life of the assets forming the Covered Pipeline (Section 8.33). As such, regardless of the value of the ICB relative to the unrecovered initial investment, the service provider is to recover the value of the ICB. In GGT's submission, if the intention was that the initial investment was to be recovered, this would be expressly stated.

693. Section 8.8 provides that Sections 8.10 to 8.14 set out principles for establishing the Capital Base when a Reference Tariff is first proposed (ie the first Access Arrangement). As noted in paragraph 15 of the Australian Competition Tribunal's decision in *Re East Australian Pipeline Limited* [2004] A Comp T 8, the ICB, once established, is not thereafter altered or 'reset'. The principles in Sections 8.10 to 8.14 are therefore of application only to that exercise: once considered, that is the end of the consideration of the question of whether the Service Provider may 'over-recover' the initial investment. Similarly, the adoption of quarterly modelling and various other assumptions regarding calculation of the economic depreciated value have relevance only while the ICB is being established, and have no ongoing relevance beyond the assessment which occurs under Section 8.10.

9.7 Misunderstanding about "over-recovery"

694. The Authority argues that if GGT recovers more than its initial investment over the life of the Covered Pipeline assets, then Reference Tariffs would not be designed to achieve the objectives of efficient cost recovery – the Reference Tariff would provide an inefficient mechanism for cost recovery (paragraph 218), and GGT would 'obtain a gain at the expense of Users' (paragraph 219). In GGT's submission, there is nothing in the Code to preclude approval of an ICB and Reference Tariffs which, over the life of the asset, mean that the service provider recovers more than the initial investment.

695. At paragraph 215 the Authority claims that "GGT" will recover more overall in present value terms than the initial investment" but has failed to demonstrate this or to provide the assumptions made to establish this claimed outcome.

696. The Draft Decision therefore, reveals a misunderstanding of the operation of the Code.

697. To the extent that setting an ICB at a value different from the actual unrecovered initial investment of the asset could result in a 'windfall gain' or a 'windfall loss' to the service provider, this is already taken into account at the time of setting the ICB. Thereafter, the basis on which the ICB was set is no longer relevant to the assessment of future Reference Tariffs.

9.8 Section 8.4 requirements for modelling

698. The second last paragraph of Section 8.4 requires that the methodology used to calculate the Cost of Service should be in accordance with generally accepted industry practice. The Draft Decision recognises (at paragraph 213) that all other regulators in gas and other industries use annual modelling. It is recognised that the quarterly modelling approach 'is an exception to the general rule.'

699. There is nothing in the Draft Decision which justifies a departure from the normal accepted approach, other than the erroneous and irrelevant considerations regarding recovery of the initial investment. The Draft Decision also recognises that there is nothing in the Code to prevent a change of modelling approach from that previously

used (paragraph 214). Given that such an approach is clearly consistent with the principles of part 8 of the Code, it is not open to the Authority to require a different approach to modelling to be used (please refer to section 1.2 on the proper exercise of regulatory discretion in this regard).

9.9 GGT's legitimate business interests

700. GGT has demonstrated to the Authority[96] that the use of quarterly modelling significantly disadvantages GGT's ability to recover the revenue to which it is entitled. The Draft Decision does not give any consideration to GGT's legitimate business interests, including the fact that it will be unable to recover its cost of capital, resulting in an under-recovery of approximately $12.8M over the 2005-09 Access Arrangement period in present value terms. It would be reasonable to expect that continuing this approach would result in a similar under recovery to GGT over the 2010-14 period.[97]

701. To continue to require use of methodology which the Authority recognises is not used by any other regulator for any other regulated gas transmission or distribution pipeline is unreasonable.

702. In summary the Authority considers that GGT should only ever recover the initial investment once, and so seek that the quarterly modelling approach be maintained. The Authority is trying to apply the Code so that over the life of the asset the original investment is only recovered once, whereas this is not the intent of the Code, which allows a broader definition of the initial investment, as contained in the Code 8.10.

[96] Attachment 3 contains correspondence between GGT and the Authority on this matter.

[97] Modelling conducted by the Authority, provided to GGT with the Draft Decision, indicates the impact of this decision at approximately $9 million.

10 Non-Tariff Amendments

10.1 Introduction

703. The following section provides GGT's response to the Authority's Draft Decision non-tariff Amendments. Each non-tariff Amendment numbers 1, 2, 18 to 43 inclusive and 45 (in regard to clauses 3.1 to 3.3 of the Access Arrangement) will be discussed separately below and will be incorporated in GGT's proposed Amendment to Proposed Revisions to Access Arrangement ("ARAA").

704. It is noted that Amendments 3 to 16 inclusive and 44 and 45 (in regard to clauses 3.4 of the Access Arrangement) are discussed in other sections of this submission.

705. On 12 November 2009, GGT met with the Authority to discuss the abovementioned non-tariff Amendments. At this meeting, GGT advised that it had accepted a number of the Amendments (i.e., Amendments 18, 19, 23, 24, 30, 38, 39 and 43) as required in the Draft Decision for the GGT Revised Access Arrangement. With respect to the other Amendments that were discussed at the meeting, the Authority requested that GGT provide its suggested changes to the Authority's Amendments in a process implemented on an informal basis outside of the public submission process. Following this process, GGT will provide its amended Proposed Revisions to Access Arrangement

706. On 20 November 2009, GGT provided its proposed changes to Amendment numbers 18, 19, 23, 24, 30, 38, 39 and 43 and sought a response from the Authority as to whether the proposed changes met its expectation of the Amendments.

707. On 27 November 2009, GGT provided its proposed changes to Amendment numbers 1, 2, 21, 22, 25 and 32 and sought a response from the Authority as to whether the proposed changes were acceptable in relation to the Authority's expectation of the Amendments.

708. On 4 December 2009, GGT provided its proposed changes to Amendment numbers 27, 28, 36 and 37 and sought a response from the Authority as to whether the proposed changes were acceptable in relation to the Authority's expectation of the Amendments.

709. The Authority has responded to GGT's proposed changes to Amendment numbers 1, 2, 18, 19, 21, 22, 23, 24, 25, 27, 28, 30, 32, 36, 38, 39 and 43. GGT is continuing to work with the Authority to further refine the wording on a number of these Amendments.

10.2 Amendments

Amendment 1

> *Section 4.2(a) of GGT's Proposed Revisions should be amended to replace the words "will consider the development of" with the words "will offer". The Authority indicated that Section 4.2(a) would now become as follows:*
>
> *Should any User or Prospective User have requirements which cannot be satisfied through a Reference Service, including for gas transportation from an inlet point other than the two Inlet Points at Yarraloola, GGT ~~will consider the development of~~ will offer Negotiated Services to meet that person's specific requirements. Negotiated Services will be provided on the terms and conditions negotiated between GGT and the User or Prospective User.*

GGT Response:

710. GGT accepts the Amendment in principle and is working with the Authority to further refine the wording.

Amendment 2

> *Section 4.2 of GGT's Proposed Revisions should be amended to insert a new subparagraph 4.2(c) as follows:*
>
> > *For the avoidance of doubt, the Negotiated Services which GGT will offer include an Interruptible Service for the haulage of gas which is subject to curtailment or interruption by GGT.*

GGT Response:

711. GGT accepts the Amendment in principle and is working with the Authority to further refine the wording.

Amendment 18

> *The definition of "Imposts" in Appendix 1 to GGT's Proposed Revisions should be amended as follows:*
>
> *Impost means any royalty (based on value, but not profit or otherwise), petroleum resource rent tax, environmental tax, excise, sales tax, use tax, consumption tax, levy~~, impost~~ or duty imposed by or payable to any Government Authority affecting the transportation and supply of Gas at or upstream of the Outlet Point but does not include any income taxes;*

GGT Response:

712. GGT accepts the Amendment and will incorporate this into the amended Revised Access Arrangement.

Amendment 19

> *Section 5.4(c) of GGT's Proposed Revisions should be amended to:*
>
> *GGT may submit one or more Impost Notices each Year. This notice may incorporate a number of claims relating to the changes. For the purposed of Section 8.3D(b)(i) of the Code the minimum notice period for an Impost Notice is ~~15~~25 Business Days.*

GGT Response:

713. GGT accepts the Amendment and will incorporate this into the amended Revised Access Arrangement.

Amendment 20

> *A GGT Information Package which contains reasonable terms should be included as part of GGT's Proposed Revisions or all references to this Information Package in GGT's Proposed Revisions should be deleted and replaced with appropriate alternative provisions.*

GGT Response:

714. GGT considers that substantial changes are required to incorporate the Amendment and in consultation with the Authority GGT is progressing with the required changes necessary to address this Amendment.

715. Amendments 20, 40, 41 and 42 relate to the GGT Information Package and GGT considers that such Amendments necessitate substantial changes to the Access Arrangement, Appendix 1 – Definitions and Interpretation; Appendix 2.1 – Enquiry Form and Appendix 2.2 – Order Form.

Amendment 21

Section 8.1 of GGT's Proposed Revisions should be amended to read:

The terms and conditions on which the Reference Service will be provided by GGT to a Prospective User are those contained in the Service Agreement, which will be constituted by:

the Order Form executed by the Prospective User and accepted by GGT; and

the General Terms and Conditions;~~ and~~

any Conditions under clause 8.3 of this Access Arrangement.

GGT Response:

716. GGT accepts the Amendment in principle and is working with the Authority to further refine the wording.

Amendment 22

Section 8.3(a) of GGT's Proposed Revisions should be amended to make it clear whether the Conditions in Section 8.3 of GGT's Proposed Revisions apply to all Services or only Reference Services.

GGT Response:

717. GGT accepts the Amendment in principle and is working with the Authority to further refine the wording.

Amendment 23

Sub-clause 3.2 of the General Terms and Conditions to GGT's Proposed Revisions should be amended to read as follows:

If any additions or enhancements to the Pipeline which are required to provide the Service are not operational following the expiry of 12 Months from the Commencement Date the parties may:

agree to defer the date for commencement of that Service to another date; or

agree to the provision of a reduced scope of the Service which is feasible with the available Capacity; and

if either clause 3.2(a) or 3.2(b) applies, agree the charges that will apply to reflect the new date for commencement or the reduced scope for the Service. ~~and~~

if the parties are unable to agree in accordance with either clause 3.2(a), (b) or (c) then either party may refer the matter to dispute resolution as provided for in clause 22 of the General Terms and Conditions. In the event that neither party has referred the matter for dispute resolution within 30 days after the expiry of the period of 12 months, the Service Agreement may be terminated by written notice by either party without penalty or cost to either party.

If the parties are unable to agree in accordance with either clause 3.2(a), (b) or (c) then either party may refer the matter for dispute resolution as provided for in clause 22 of the General Terms and Conditions. In the event that neither party has referred the matter for dispute resolution within 30 days after the date of expiry of the period of 12 Months, the Service Agreement may be terminated by written notice by either party without penalty or cost to either party.

GGT Response:

718. GGT accepts the Amendment and will incorporate this into the amended Revised Access Arrangement.

Amendment 24

Sub -clause 4.4(c) of the General Terms and Conditions to GGT's Proposed Revisions should be amended to read:

The SQO Notice must include the following information:

the quantities of Gas required to be received at the Inlet Point;

the quantities of Gas required to be delivered at the Outlet Point;

the Gas Day the SQO is required; and

any other information reasonably required by GGT.

GGT Response:

719. GGT accepts the Amendment and will incorporate this into the amended Revised Access Arrangement.

Amendment 25

Sub-clause 6.1 of the General Terms and Conditions to GGT's Proposed Revisions should be amended to read as follows:

GGT will provide for the benefit of the User at the User's cost unless otherwise specified:

advice in respect of engineering and planning for the connection of the User's facilities to the Pipeline;

a remotely actuated shut off valve and a remotely actuated flow control valve at the Outlet Facilities at each Outlet Point;

supervision of connection activities for connection to the Pipeline or to the Outlet Facilities;

services related to the commissioning of the Outlet Facilities; and

access to reasonable specified data by GGT from GGT's SCADA and other systems as determined by GGT acting reasonably.

GGT Response:

720. GGT accepts the Amendment in principle and is working with the Authority to further refine the wording.

Amendment 26

Clause 6 of the General Terms and Conditions to GGT's Proposed Revisions should be amended to:

restore the provisions that are in clause 6 of the General Terms and Conditions to the current Access Arrangement which give Users and third parties the right to elect to own, operate and maintain Outlet Facilities; and

remove the references to the Second Schedule and replace them with a reference to the "technical specifications of a reasonable and prudent pipeline operator".

GGT Response:

721. GGT considers that substantial changes are required to incorporate the Amendment and in consultation with the Authority GGT is progressing with the required changes necessary to address this Amendment.

722. Amendments 26, 29, 31, 32, 33, 34 and 35 are all inter-related and relate to Outlet Points. GGT considers that Amendment number 26 requires substantial amendment to clauses 6.4, 6.6 and 6.7 of the current Access Arrangement approved by the Authority July 2005 to reflect the additional legislative and statutory obligations that have been placed on GGT since 2005.

Amendment 27

Sub-clause 9.6(e) of the General Terms and Conditions to GGT's Proposed Revisions should be reinserted and read:

GGT will rebate 95 percent of Quantity Variation Charges as defined in the Fourth Schedule in excess of GGT's direct costs and expenses associated with and arising from the User's acts or omissions which cause the overruns or imbalances to occur:

to any other User of the Reference Service not having caused the particular Quantity Variation Charges to occur; and

which rebate will be paid to non-offending Users, where relevant, at the end of each calendar year.

For the avoidance of doubt, where there is no other User of the Reference Service at the time at which the overruns or imbalance occur then this rebate mechanism will not be activated.

GGT Response:

723. GGT accepts the Amendment and will incorporate this into the amended Revised Access Arrangement.

Amendment 28

The minimum value for the Gross Heating Value component in the tables labelled Inlet Gas Specification and Delivery Gas Specification in the Second Schedule to the General Terms and Conditions to GGT's Proposed Revisions should be amended from 37.0 MJ/m^3 to 35.5 MJ/m^3.

GGT Response:

724. GGT accepts the Amendment and will incorporate this into the amended Revised Access Arrangement.

Amendment 29

> *Sub-clause 11.2(a) of the General Terms and Conditions to GGT's Proposed Revisions should be amended to read:*
>
> > *The Outlet Facilities installed by GGT under clause 6.2 will enable GGT to properly establish the quantity and quality of Gas delivered By GGT to the User at the Outlet Point.*
>
> *Except as provided in clauses 6.4(c) and 6.4(f), the User shall install or have installed on its behalf, and GGT shall operate, at or near the Outlet Point, Outlet Facilities necessary for GGT to be able to properly establish the quantity and quality of Gas delivered to the User at the Outlet Point.*

GGT Response:

725. GGT considers that substantial changes are required to incorporate the Amendment and in consultation with the Authority GGT is progressing with the required changes necessary to address this Amendment.

726. Amendments 26, 29, 31, 32, 33, 34 and 35 are all inter-related and relate to Outlet Points. GGT considers that Amendment number 26 requires substantial amendment to clauses 6.4, 6.6 and 6.7 of the current Access Arrangement approved by the Authority July 2005 to reflect the additional legislative and statutory obligations that have been placed on GGT since 2005.

Amendment 30

> *Sub-clause 11.3 of the General Terms and Conditions to GGT's Revision Proposal should be amended to read:*
>
> *The measuring equipment comprised in the Inlet Facilities and in each of the Outlet Facilities shall comply in all respects with ~~good pipeline industry practice~~ the standard of a reasonable and prudent pipeline operator.*

GGT Response:

727. GGT accepts the Amendment and will incorporate this into the amended Revised Access Arrangement.

Amendment 31

> *Sub-clause 11.4 of the General Terms and Conditions to the current Access Arrangement should be reinstated into the proposed clause 11 of the General Terms and Conditions to GGT's Proposed Revisions as:*
>
> *Costs to be Bourne by User*
>
> *The costs of installation, operation and maintenance of facilities not owned by the Owners referred to in clauses 11.1 and 11.2 shall be for the account of the User.*

GGT Response:

728. GGT considers that substantial changes are required to incorporate the Amendment and in consultation with the Authority GGT is progressing with the required changes necessary to address this Amendment.

729. Amendments 26, 29, 31, 32, 33, 34 and 35 are all inter-related and relate to Outlet Points. GGT considers that Amendment number 26 requires substantial amendment to clauses 6.4, 6.6 and 6.7 of the current Access Arrangement approved by the

Authority July 2005 to reflect the additional legislative and statutory obligations that have been placed on GGT since 2005.

Amendment 32

> *Sub-clause 11.5 of the General Terms and Conditions to GGT's Proposed Revisions should be amended to read:*
>
> *GGT grants to the User the right to install and maintain check metering equipment ~~within the User's facilities or premises~~ to enable the User to check the bulk measuring equipment located at any site provided that such check metering equipment shall not interfere in any way with any measuring equipment (or other equipment) and that the cost of installing and maintaining any such check metering equipment shall be borne by the User and such equipment shall meet the accuracies contained in the First Schedule.*

GGT Response:

730. GGT considers that substantial changes are required to incorporate the Amendment and in consultation with the Authority GGT is progressing with the required changes necessary to address this Amendment.

731. Amendments 26, 29, 31, 32, 33, 34 and 35 are all inter-related and relate to Outlet Points. GGT considers that Amendment number 26 requires substantial amendment to clauses 6.4, 6.6 and 6.7 of the current Access Arrangement approved by the Authority July 2005 to reflect the additional legislative and statutory obligations that have been placed on GGT since 2005.

Amendment 33

> *Sub-clause 19.1 of the General Terms and Conditions to GGT's Proposed Revisions should be amended to read:*
>
> *The User shall procure and maintain at its own expense throughout the Terms of the Service Agreement the following insurances with reputable insurers:*
>
> > *workers compensation insurances in accordance with the Workers Compensation and Rehabilitation Act 1981;*
> >
> > *all risks property insurance to indemnify it against damage, loss or destruction of Inlet Facilities and Outlet Facilities; and*
> >
> > *public liability insurance for an amount of not less than $20,000,000 to indemnify it against the risk of damage, death or injury to the property or personnel of third parties.*

GGT Response:

732. GGT considers that substantial changes are required to incorporate the Amendment and in consultation with the Authority GGT is progressing with the required changes necessary to address this Amendment.

733. Amendments 26, 29, 31, 32, 33, 34 and 35 are all inter-related and relate to Outlet Points. GGT considers that Amendment number 26 requires substantial amendment to clauses 6.4, 6.6 and 6.7 of the current Access Arrangement approved by the Authority July 2005 to reflect the additional legislative and statutory obligations that have been placed on GGT since 2005.

Amendment 34

> *Sub-clause 19.2 of the General Terms and Conditions to GGT's Proposed Revisions should be amended to read:*
>
> *The User shall arrange for endorsements on the policies in clauses 19.1(b) and 19.1(c) of the interests of the Owners and GGT such that those interests are effectively insured under those policies and for the insurers to waive rights of subrogation against them.*

GGT Response:

734. GGT considers that substantial changes are required to incorporate the Amendment and in consultation with the Authority GGT is progressing with the required changes necessary to address this Amendment.

735. Amendments 26, 29, 31, 32, 33, 34 and 35 are all inter-related and relate to Outlet Points. GGT considers that Amendment number 26 requires substantial amendment to clauses 6.4, 6.6 and 6.7 of the current Access Arrangement approved by the Authority July 2005 to reflect the additional legislative and statutory obligations that have been placed on GGT since 2005.

Amendment 35

> *Sub-clause 20.7(c) of the General Terms and Conditions to GGT's Proposed Revisions should be amended to read as follows:*
>
> *The User shall be obliged to pay Connection Charges for any new Outlet Facilities to be used by the New User in respect of Transferred Capacity and the administration charges that GGT would apply to any new User entering into a gas transmission agreement with GGT, in accordance with the Statement of Tariffs and Charges prevailing at the time of the transfer. The User shall ensure that any new Outlet Facilities used by the New User shall comply with the technical specifications of a reasonable and prudent pipeline operator.*

GGT Response:

736. GGT considers that substantial changes are required to incorporate the Amendment and in consultation with the Authority GGT is progressing with the required changes necessary to address this Amendment.

737. Amendments 26, 29, 31, 32, 33, 34 and 35 are all inter-related and relate to Outlet Points. GGT considers that Amendment number 26 requires substantial amendment to clauses 6.4, 6.6 and 6.7 of the current Access Arrangement approved by the Authority July 2005 to reflect the additional legislative and statutory obligations that have been placed on GGT since 2005.

Amendment 36

> *The definition of Capacity in Appendix 1 to GGT's Proposed Revisions should be amended to correspond with the definition of Capacity in the Code, as follows:*
>
> ***Capacity** means the capacity of the Pipeline, as determined from time to time by GGT for the Pipeline as configured and subject to the operating conditions in effect at the time, which is available for the transmission of Gas between an Inlet Point and an Outlet Point the measure of the potential of*

the Covered Pipeline as currently configured to deliver a Service between a Receipt Point and a Delivery Point at a point in time;

GGT Response:

738. GGT accepts the Amendment in principle and is working with the Authority to further refine the wording.

Amendment 37

Section 9 of GGT's Proposed Revisions should be amended to include an additional section 9.2 to read as follows:

For the avoidance of doubt, the same terms as those set out in clause 20 of the General Terms and Conditions, which are confined to Reference Services, will apply to a transfer or assignment of Capacity in the Covered Pipeline by Users of a Non-Reference Service.

GGT Response:

739. GGT accepts the Amendment in principle and is working with the Authority to further refine the wording.

Amendment 38

Sub-section 7.2 of GGT's Proposed Revisions should be amended to include the following section 7.2(e):

For the purpose of sub-clause 7.2(d) above a Prospective User is only obliged to bear those costs of the Investigations that are reasonably incurred.

GGT Response:

740. GGT accepts the Amendment and will incorporate this into the amended Revised Access Arrangement.

Amendment 39:

Sub-section 7.2 of GGT's Proposed Revisions should be amended to include the following section 7.2(i):

Where a Prospective User bears the costs of an Investigation GGT must provide that Prospective User with an itemisation of the costs incurred by GGT as soon as reasonably practicable following the completion of the Investigations and prior to a Prospective User being obliged to pay those costs.

GGT Response:

741. GGT accepts the Amendment and will incorporate this into the amended Revised Access Arrangement.

Amendment 40

Appendix 2.1 to GGT's Proposed Revisions should be amended so that Paragraph 16 reads as follows:

Signify by ticking appropriate box below whether or not the Prospective User is prepared to contribute to the reasonable costs of GGT undertaking Investigations ~~and the provision of Developable Capacity~~ as referred to in clause 1.5(b)(2) in the GGT Information Package.

and to insert a new paragraph immediately following the above paragraph as follows:

Signify by ticking appropriate box below whether or not the Prospective User is prepared to contribute to the reasonable costs of GGT providing Developable Capacity as referred to in clause 1.5(b)(2) in the GGT Information Package.

GGT Response:

742. GGT considers that substantial changes are required to incorporate the Amendment and in consultation with the Authority GGT is progressing with the required changes necessary to address this Amendment.

743. Amendments 20, 40, 41 and 42 relate to the GGT Information Package and GGT considers that such Amendments necessitate substantial changes to the Access Arrangement, Appendix 1 – Definitions and Interpretation; Appendix 2.1 – Enquiry Form and Appendix 2.2 – Order Form.

Amendment 41

Paragraph 22 of Appendix 2.2 to GGT's Proposed Revisions be amended to read as follows:

Signify by ticking appropriate box below whether or not the User is prepared to contribute to the reasonable costs of GGT undertaking Investigations referred to in clause 1.5(b)(2) in the GGT Information Package.

GGT Response:

744. GGT considers that substantial changes are required to incorporate the Amendment and in consultation with the Authority GGT is progressing with the required changes necessary to address this Amendment.

745. Amendments 20, 40, 41 and 42 relate to the GGT Information Package and GGT considers that such Amendments necessitate substantial changes to the Access Arrangement, Appendix 1 – Definitions and Interpretation; Appendix 2.1 – Enquiry Form and Appendix 2.2 – Order Form.

Amendment 42

Paragraph 23 of Appendix 2.2 to GGT's Proposed Revisions be amended to read as follows:

Signify by ticking appropriate box below whether or not User is prepared to contribute to the reasonable costs of GGT providing Developable Capacity as referred to in clause 1.5(b)(2) of the GGT Information Package.

GGT Response:

746. GGT considers that substantial changes are required to incorporate the Amendment and in consultation with the Authority GGT is progressing with the required changes necessary to address this Amendment.

747. Amendments 20, 40, 41 and 42 relate to the GGT Information Package and GGT considers that such Amendments necessitate substantial changes to the Access Arrangement, Appendix 1 – Definitions and Interpretation; Appendix 2.1 – Enquiry Form and Appendix 2.2 – Order Form.

Amendment 43

The definition of Prospective User in GGT's Proposed Revisions should be amended to correspond with the definition of Prospective User in the Code as follows:

***Prospective User** means a person who seeks ~~access to the Covered Pipeline for the purpose of transporting Gas~~ or who is reasonably likely to seek to enter into a contract for a Service and includes a User who seeks or may seek to enter into a contract for an additional Service.*

GGT Response:

748. GGT accepts the Amendment and will incorporate this into the amended Revised Access Arrangement.

Amendment 45

Section 3 of GGT's Proposed Revisions be amended to read as follows:

3.1 Term

This Access Arrangement comes into effect on the Effective Date. The Access Arrangement Period or term of the Access Arrangement ~~will~~ is intended to expire on the Revisions Commencement Date.

3.2 Review of Access Arrangement

In accordance with Section 3.17 of the Code:

the Revisions Submission Date is 1 ~~July~~ February 2014; and

the intended Revisions Commencement Date is the later of 1 January 2015 and the date a revised Access Arrangement replacing this Access Arrangement approved by the Regulator takes effect.

3.3 Delay

In the event that the Access Arrangement Proposed Revisions in relation to the Access Arrangement Period next following this Access Arrangement (Next Access Arrangement) does not come into effect on or before the intended Revisions Commencement Date this Access Arrangement will not expire until the date on which the Regulator specifies that the Next Access Arrangement comes into effect.

3.4 Trigger Event

If a Revisions Trigger Event occurs at any time prior to 3 months before the Revisions Submission Date then GGT must submit revisions to this Access Arrangement by no later than the day which is 3 months after the Revisions Trigger Event occurs.

For the purpose of paragraph (a) a Revisions Trigger Event occurs when GGT lodges with the Minister for Mines, Western Australia, an application/s for alteration/s to Pipeline Licence PL24, Goldfields Gas Pipeline, as required under licence condition 10 "Alterations to the Pipeline", under which:

GGT seeks to vary Pipeline Licence PL24 where the alteration/s relates to the construction and installation of expansion facilities; and

the capacity of the GGP will be increased (as measured at the GGP Inlets, noting that in GGT's Access Arrangement Information

the current inlets are described in section 12, System Description); and

the total amount of all such applications made within the forthcoming Access Arrangement Period increase the capacity of the GGP (as measured at the GGP Inlets) beyond 173 TJ/day.

GGT Response:

749. In regard to the required amendments to clauses 3.1 to 3.3 inclusive, GGT considers that substantial changes are required to incorporate the amendment and in consultation with the Authority GGT is progressing with the required changes necessary to address this amendment.

750. In regard to the required amendments to clause 3.4, this matter is discussed in Section 6.8 above and is not repeated here.

Appendix A – Summary Tables

Attachment 1 - KPMG report on corporate costs

"[Information Confidential]"

Attachment 2 – Synergy report on cost of capital

Attachment 3 – Correspondence re quarterly modelling

"[Information Confidential]"

In the Draft Decision the Authority indicated that GGT should amend Tables 1, 2, 3, 4, 6, 7, 8, 9, 10, 12, 14 and 15 of the Access Arrangement Information. For the reasons expressed in section 2 of this submission GGT does not accept that these tables be amended.

Therefore, the following tables are provided by GGT in response to these abovementioned Amendments and reflect the identical table numbering to GGT's March 2009 submission on the Access Arrangement Information but take into account the forecasts in the GGTJV 2009/10 Budget (refer to sections 3 and 4 of this submission) and the correction of a minor error in GGT's Volume Forecast (refer to section 5 of this submission).

Table 1 : Total Revenue ($m, nominal)

	2010	**2011**	**2012**	**2013**	**2014**
Return	63.5	63.5	63.1	61.8	60.5
Depreciation	10.8	11.3	11.9	12.2	12.3
Non Capital costs	30.5	26.6	27.6	29.4	31.3
AA1 Over Depreciation	-0.43				
Total Revenue	**104.3**	**101.4**	**102.5**	**103.4**	**104.1**

Table 2 : GGP Capital Base roll forward 2000- 2009 ($m, nominal)

	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009 F**
Opening asset value	513.7	507.3	505.8	495.5	496.1	490.3	480.0	470.5	460.3	450.4
Capital expenditure	3.6	8.4	1.1	10.1	6.1	1.4	2.1	1.8	1.7	3.5
Change in working capital	0.3	0.7	-0.7	1.4	-0.7	-0.2	0.0	-0.2	0.5	0.2
Depreciation	10.4	10.6	10.8	10.9	11.2	11.4	11.6	11.9	12.1	11.6
Closing asset value	**507.3**	**505.8**	**495.5**	**496.1**	**490.3**	**480.0**	**470.5**	**460.3**	**450.4**	**442.4**

Table 3 : GGP Initial Capital Base ($m, 31 December 2009)

Asset class	**Value in Initial Capital Base**	**Value at 31 December 2009 F**
Pipeline and laterals	438.7	371.3
Mainline valve and scraper stations	9.2	7.2
Compressor stations	41.6	46.0
Receipt and delivery point facilities	1.5	2.1
SCADA and communications	10.1	2.1
Cathodic protection	1.8	1.7
Maintenance bases and depots	7.7	6.3
Remote accommodation	0.0	0.0
Other assets	0.4	1.9
Linepack	1.1	1.1
Working capital	1.5	2.8
Initial Capital Base	**513.7**	N/A
Capital Base	N/A	**442.4**

Table 4 : Forecast Capital Expenditure ($m, nominal)

	2010	2011	2012	2013	2014
Pipeline and laterals	0.0	0.0	0.0	0.0	0.0
Mainline valve and scraper stations	0.1	0.0	0.0	0.0	0.0
Compressor stations	3.4	3.4	0.8	0.9	0.9
Receipt and delivery point facilities	0.1	0.1	0.1	0.1	0.1
SCADA and communications	0.4	1.9	1.9	0.5	0.5
Cathodic protection	0.1	0.0	0.0	0.0	0.0
Maintenance bases and depots	0.0	0.0	0.0	0.0	0.0
Remote Accommodation	1.3	1.4	0.0	0.0	0.0
Other assets	3.4	2.3	0.8	1.2	0.6
Total	**8.7**	**9.1**	**3.7**	**2.7**	**2.2**

Table 6 : Forecast Depreciation ($m, nominal)

	2010	2011	2012	2013	2014
Pipeline and laterals	6.8	6.8	6.8	6.8	6.8
Mainline valve and scraper stations	0.2	0.2	0.2	0.2	0.2
Compressor stations	2.6	2.7	2.9	2.9	2.9
Receipt and delivery point facilities	0.1	0.1	0.1	0.1	0.1
SCADA and communications	0.3	0.3	0.5	0.7	0.7
Cathodic protection	0.1	0.2	0.3	0.3	0.3
Maintenance bases and depots	0.2	0.2	0.2	0.2	0.2
Remote accommodation					
Other assets	0.5	0.7	0.8	0.8	0.9
Total	**10.8**	**11.3**	**11.9**	**12.2**	**12.3**

Table 7 : GGP Capital Base roll forward 2010- 2014 ($m, nominal)

	2010	2011	2012	2013	2014
Opening asset value	442.4	442.4	439.8	431.0	421.6
Capital expenditure	8.7	9.1	3.7	2.7	2.2
Change in working capital	2.1	-0.4	-0.6	0.1	0.2
Depreciation	10.8	11.3	11.9	12.2	12.3
Closing asset value	**442.4**	**439.8**	**431.0**	**421.6**	**411.7**

Table 8 : Parameter values for determination of a Rate of Return for the GGP

Parameter	Value
Nominal risk free rate	5.37%
Real risk free rate	2.90%
Expected inflation	2.40%
Market risk premium	6.0% -7.0%
Equity beta	1.0 - 1.4
Cost of debt margin	4.38% - 4.58%
Cost of raising debt	0.75%
Corporate tax rate	30.00%
Franking credit value	0% - 40%
Debt to total assets ratio	60%
Equity to total assets ratio	40%

Table 9 : Range of pre-tax nominal rate of return

	Range
Rate of return	11.85% - 15.09%

Table 10 : Non Capital Costs ($m, nominal)

	2010	2011	2012	2013	2014
Operating & Maintenance and Administration & General	24.2	20.3	21.2	23.0	24.8
Corporate Overheads	5.8	5.8	5.8	5.9	6.0
Asymmetric Risk	0.5	0.5	0.5	0.5	0.6
Total	**30.5**	**26.6**	**27.6**	**29.4**	**31.3**

Table 12: Volume Forecasts TJ/D

Forecast	**2010**	**2011**	**2012**	**2013**	**2014**
Capacity (MDQ, TJ/day)	109.0	109.0	109.0	109.0	109.0
Contracted capacity (MDQ, TJ/day)	104.73	104.81	104.73	105.04	105.08
Available Capacity (MDQ, TJ/day)	4.27	4.19	4.27	3.96	3.92
Average daily throughput (TJ/day)	88.7	88.7	88.7	88.7	88.7
Total throughput (PJ)	32.7	32.7	32.8	32.7	32.7

Table 14 : Annual Reference Service Revenue ($m, nominal)

	2010	2011	2012	2013	2014
Revenue	4.9	4.2	4.2	5.0	5.7

Table 15 : Annual Revenue from Reference Tariff ($m, nominal)

	2010	2011	2012	2013	2014
Revenue	4.3	4.4	4.5	4.6	4.7

Review of the WACC to apply to the Goldfields Gas Pipeline

Response to ERA Draft Decision

December 2009

Synergies Economic Consulting Pty Ltd
www.synergies.com.au

Disclaimer

Synergies Economic Consulting (Synergies) has prepared this advice exclusively for the use of the party or parties specified in the report (the client) and for the purposes specified in the report. The report is supplied in good faith and reflects the knowledge, expertise and experience of the consultants involved. Synergies accepts no responsibility whatsoever for any loss suffered by any person taking action or refraining from taking action as a result of reliance on the report, other than the client.

In conducting the analysis in the report Synergies has used information available at the date of publication, noting that the intention of this work is to provide material relevant to the development of policy rather than definitive guidance as to the appropriate level of pricing to be specified for particular circumstance.

Executive Summary

Synergies Economic Consulting has been requested by Goldfields Gas Transmission (GGT) to prepare a response to the Draft Decision recently published by the Economic Regulation Authority (the Authority) in relation to the Weighted Average Cost of Capital (WACC) to apply to the Goldfields Gas Pipeline (GGP).

We have previously prepared responses for GGT on specific issues including beta, inflation, the cost of debt and debt and equity raising costs. For this response we have been asked to look at all of the aspects of the WACC as set out in the Draft Decision. The purpose of this report is to:

- respond to issues raised with our previous analysis; and
- identify and discuss the areas in the Draft Decision where we disagree with the Authority's assessment.

Market risk premium

The Authority has revised its range to 5% to 7% and in so doing considers that this takes sufficient account of the global financial crisis (GFC). However, it has also proposed to select an estimate from the mid-point of the WACC range and in so doing simply aligns its MRP estimate with other Australian regulators prior to the GFC. The Australian Energy Regulator has determined a value of 6.5%, which was primarily in recognition of the GFC. Importantly, we also note that the Authority's own consultant, Frontier Economics, considers that a range of 6% to 7% is currently appropriate.

We do not consider that the Authority has adequately established why the lower bound of its range should be set at below 6%. In our view, the weight of evidence supports a range of 6% to 7%. The value initially proposed by GGT, which was 7%, is within this range.

Equity beta

We have sought to identify some of the key concerns that were raised with our analysis by the Authority's consultant, including:

- the implications of the first principles analysis for GGP's beta;
- the sample used to estimate the beta of the mining companies and how the estimate was applied; and

- filtering the equity beta sample based on the t-statistic.

First principles analysis

One of the key concerns expressed regarding our analysis is that we had not demonstrated that GGP's take-or-pay provisions do not offset its exposure to volume risk (based on its unique customer profile). The first principles analysis is a qualitative assessment and it is not possible to robustly quantify the impact of one factor in isolation (or other factors in combination).

Take-or-pay information on other gas pipelines is not readily available. We therefore obtained information from GGP's owner, the APA Group, as it owns a number of gas pipeline assets in Australia. This information has been included in a confidential appendix to this submission, along with some other information we obtained regarding GGP's contracts.

As the relevant 'benchmark' for this analysis is the 'average' regulated gas pipeline business in Australia, we focussed on those pipelines that reflected this 'average' profile. These pipelines tend to have a mix of residential, commercial and industrial customers. We have argued that GGP's profile is unique because its customer base largely consists of commercial and industrial customers in the mining sector (or customers that are dependent on that sector).

The two pipelines that APA owns that were considered to reflect the 'average' regulated pipeline business are the Roma to Brisbane and Moomba to Sydney pipelines. On average, the take-or-pay protection for these pipelines equates to GGP's (one was slightly lower and the other was higher). Based on this data, we therefore have no reason to believe that GGP's take-or-pay protection differs from the 'average' gas pipeline business. In making a comparative assessment, the impact of take-or-pay would therefore be neutral. What is different is GGP's unique customer profile (again, when compared to the 'average' regulated pipeline business).

We have also examined other information provided to us by GGT in relation to its contract profile. This information is commercially sensitive and has been summarised in a confidential appendix to this report. This information highlights to us that while GGP does have long-term contracts, it is not appropriate to assume that its future revenues over this horizon are certain. It also shows that the risk of reductions in volumes is not only about credit risk, but it is also about the risk of customers curtailing demand for commercial reasons, for example, if there is a significant downturn in the commodity markets.

We continue to remain of the view that GGP does have higher systematic volume risk than the average regulated gas pipeline business and this arises from its unique customer profile (when compared to this average business). While our proposed approach to capture these differences is only approximate, we consider that the case for a higher beta is a legitimate one. This is considered preferable to ignoring these differences altogether, which we consider would materially increase the risk of error.

Beta assessment

Concerns were also raised regarding our beta analysis and the treatment of the mining company sample.

First, we have undertaken an updated analysis based on our original sample and noted that the average beta of the mining company sample has fallen materially.

Second, we have sought to respond to comments made by Frontier in relation to our averaging approach. Frontier proposed weighting the sample by market capitalisation, rather than taking a simple average. The purpose of this was to recognise the contribution of BHP Billiton and Rio Tinto to the sample, both of whom are major customers of the pipeline (although APA advised that the end customers are often subsidiaries who are not supported by parent guarantees).

However, if we weighted the sample in this way, it would imply that these firms account for over 85% of GGP's revenues. We understand this contribution is closer to 50%. We therefore determined a weighted average beta for our mining sample by giving a 50% weighting to the average betas of these two companies, and a 50% weighting to the average beta of our nickel, gold and iron ore sample.

We then applied the same approach to establishing the beta range as we did previously. The lower bound of the range was set at an equity beta of 1 (or an asset beta of 0.4). Our updated analysis of our sample of gas pipeline companies did not change this assessment.

The upper bound was estimated by applying a 83% weighting to our gas pipeline sample (asset beta of 0.4) and 17% to our re-weighted mining company sample (which had an asset beta of 1.37). This resulted in an upper bound estimate of 0.56, or an equity beta of 1.4 (assuming 60% gearing and applying the Authority's preferred relevering approach). As outlined in our previous report, these weights approximate GGP's take-or-pay profile.

We recognise that this is an approximation. Further, this continues to give significantly more weight to the beta of the gas distribution businesses. The Authority has indicated that it continues to have concerns with basing the analysis on the mining company

sample however it only contributes to 13% of the upper bound estimate. For the reasons we have set out in our previous report and expanded upon in this report, we do not consider it appropriate to ignore this unique risk profile altogether. While our method is only an approximation, we consider that it gives appropriate recognition to GGP's underlying systematic risk.

The t-statistic

Frontier had also expressed concerns with our use of the t-statistic to filter our comparator sample. The t-statistic is commonly used in statistical analysis and is used to test the hypothesis that the regression coefficient is statistically different from zero. While a lower standard error is preferred, there is no clear guideline or 'benchmark' for comparison. The t-statistic facilitates this relative comparison. The rule of thumb that tends to be applied is that the t-statistic needs to be greater than two for the estimate to be considered reliable.

We agree with Frontier that a low beta coefficient could lead to a lower t-statistic (as the beta coefficient is the numerator), although a low t-statistic could also arise if the standard error was very high. The exclusion of estimates with a t-statistic of two was not intended to introduce any bias into the analysis – indeed it was done with the contrary intention.

We maintain our view that observing t-statistics is important to any statistical analysis, including beta estimation. However, we have presented our results with and without the estimates that have a t-statistic of less than two. We also reported R-squared estimates. The R-squared seeks to measure how much of the variability of the dependent variable can be explained by the independent variable. We note that all of our estimates that had t-statistics less than two also had very low R-squareds (that is, close to zero). We consider that this provides a further reason for excluding the firms with t-statistics less than two.

Gamma

The Authority does not appear to have given any real consideration to the proposal submitted by GGT (a gamma value of 0.2) or indeed the advice of its own consultant, Frontier (who concludes that a range of between zero and 0.4 is appropriate). Instead, the Authority has adopted the AER's value of 0.65, which it also applied in its decision in relation to the South West Interconnected Network (SWIN).

Apart from the fact that the Authority has not responded to GGP's proposal or provided any feedback as to why values below 0.5 are not within the bounds of a reasonable range, we do not agree with the AER's decision in relation to gamma. The

problems with its decision have been addressed in a number of submissions that have been subsequently been made to the AER.

In summary, the main problems with the AER's decision are that:

- its assumed distribution rate of 100% is ill-founded and inconsistent with the market average of 71%, which is widely applied by practitioners;
- material concerns have been raised with the single study that was relied upon by the AER to set its lower bound for the value of franking credits, which was a 2006 study by Beggs and Skeels. One of the authors of this study (Skeels) has subsequently prepared a paper that has been submitted to the AER, which concurred with a revised estimate based on an extension of their original analysis that has been undertaken by SFG Consulting. This estimate is 0.23, which is materially lower than Beggs and Skeels' value of 0.57;
- material concerns have also been raised with the study relied upon to set the upper bound for the value of franking credits, which was an analysis of tax statistics by Handley and Maheswaran (2008). Apart from the fact that tax statistics analysis cannot be used to value franking credits, an analysis we have undertaken casts doubt as to their results. While we are not proposing that our estimate can be used to set a value for franking credits, we have highlighted a number of questions about Handley and Maheswaran's study, which we have not been able to answer given we have not yet been able to access their data.

Overall, we consider that the value originally submitted by GGT of 0.2 lies within the bounds of a reasonable range. The Authority has not addressed why it should be excluded from its range.

Cost of debt

Notional credit rating

We do not consider that the Authority's proposed notional credit rating of BBB+ is reasonable. Our original sample was limited to owners and/or operators of gas pipeline infrastructure, most of whom were rated BBB-. APA has subsequently obtained a credit rating and is rated BBB.

An assumption of BBB- aligns with most of the businesses in our sample. It also would seem reasonable that particularly given its risk profile, GGP would have a lower rating than its larger, more diversified owner, APA. At worst, it should be rated no higher. Based on comments made by Frontier, we have also calculated indicative interest cover ratios for GGP and this also supports a rating of no higher than BBB.

Debt margin

It is well known that there are currently significant difficulties in robustly estimating a ten year BBB debt margin. The Authority recognises this problem and has indicated that it is currently considering solutions to address it.

In the meantime, we have identified a number of possible options for estimating a debt margin in the current environment (apart from constructing a new yield curve based on the limited market data, which we understand may be considered). We have concluded that it is appropriate to use a number of methods rather than rely on the one, as no method can currently be seen to produce a 'better' or more reliable estimate.

The methods that we consider it appropriate to reference are:

- **CBA Spectrum**. It remains the sole provider of ten year BBB bond yields in Australia. As outlined above, the AER has now accepted that this is a valid alternative although is not proposing to solely rely on it. It has applied this method in combination with Bloomberg in one of its most recent decisions and solely applied it in three of them.
- **Bloomberg seven year BBB, extrapolated based on AAA data**. While there are some difficulties in assuming that the term structure inherent in the AAA yield curve can be applied to a BBB, it is considered more likely that the long term AAA fair value yields are based on actual data from long-term bond issues and hence are at least reflective of actual market data.
- **Bloomberg seven year BBB, extrapolated based on the term structure of five year to seven year BBB data**. As there are concerns in assuming that the term structure of the AAA yield curve can be applied to BBB, this method only uses BBB data. The term structure between five years and seven years is applied to the seven year data and extrapolated to ten years. This assumes the slope of the yield curve is constant.

Based on the indicative margins estimated above and using data over a 20 day period to the 19th of October 2009, the resulting range based on these methods would be between 438 and 458 basis points. The average of the three methods is 445 basis points.

We note that the last four decisions made by the AER since the end of October 2009 have included debt margins of between 400 and 431 basis points, based on a notional credit rating assumption of BBB+. The Authority's recent Final Decision in relation to the SWIN applied a margin of 408 to 419 basis points, which was arrived at using a combination of CBA Spectrum and Bloomberg methods.

We note that referencing both Bloomberg and CBA Spectrum was also recommended by the Authority's consultant, Frontier.

Debt raising costs

It is very difficult to observe debt raising costs in the market. GGT had expressed concerns that its cost of raising debt may have increased following the GFC however it is difficult to test this using publicly available data.

APA's corporate treasury has provided us with information regarding its costs of raising debt in 2009. This has been provided in a confidential appendix to this submission. This shows that its debt raising costs have materially increased since the GFC and are now in the order of at least 75 basis points. APA has also provided information regarding the drivers of the increases, which include the impact of banks tightening their credit policies. It also views these changes as a 'step change' in the market and these new levels are expected to continue to be observed for the foreseeable future. This information shows that the Authority's proposed allowance is too low.

Inflation

We have two comments in relation to the estimation of inflation. First, we consider it more appropriate to use an arithmetic approach rather than a geometric average in establishing the inflation estimate. This is because we consider that the inflation forecasts that are being averaged are independent. However, it is also recognised that this is not a material issue.

Second, we note that the Commonwealth Government has recommenced its issuance of indexed bonds, which may prompt regulators to reconsider the use of implied inflation to forecast inflation. While we do not disagree with such an approach, its reliability depends on there being sufficient liquidity in that market. It is imperative that GGP has an opportunity to respond to any proposed change should the Authority consider reintroducing this approach.

WACC range

Finally, we observe that the Authority has changed its approach to selecting the point estimate for WACC by setting it at the mid-point of the range. Previously it has selected the estimate from the upper bound, which we consider is prudent and necessary to give some recognition to the inherent uncertainty associated with estimating WACC and the asymmetric consequences of error. We consider that setting a WACC from the upper bound of the range is important given the risk of error is so high. If WACC is under-estimated, this will dilute incentives to invest, which could have material and adverse social and economic consequences.

Contents

1 Introduction

In October 2009, the Economic Regulation Authority (the Authority) released its Draft Decision on the proposed access arrangement for the Goldfields Gas Pipeline (GGP).

Synergies had previously provided advice to Goldfields Gas Transmission (GGT) in relation to an appropriate cost of capital that should be used in this proposed access arrangement and in particular provided advice on some of the specific components which are used in calculating the cost of capital.

The purpose of this report is to respond to the Authority's Draft Decision as it relates to the appropriate cost of capital and the specific components which are used in calculating the cost of capital. The purpose of this report is to:

- respond to issues raised with our previous analysis; and
- identify and discuss the areas in the Draft Decision where we disagree with the Authority's assessment.

2 Market risk premium

2.1 The Authority's Draft Decision

The Authority proposes to apply a range of 5% to 7%. This was the same approach applied in its Draft Decision in relation to the South West Interconnected Network (SWIN), which has since been reaffirmed in the Final Decision. GGT proposed a range of 6% to 7%.

In the SWIN Draft Decision, the Authority notes that there are "a significant number of market practitioners applying values of between 4.5 and 6.0."[1] It then references the AER's 2008 Explanatory Statement in relation to the WACC to apply to electricity distribution and transmission network businesses in support of this view.

In the AER's Explanatory Statement the measures it used to estimate the market risk premium were:

- historical estimates: 6.1 to 6.7%
- surveys: consistently 6%
- cash flow based measures: around or lower than 6%.[2]

In its Final Decision, the AER noted that:

- Long term historical estimates (1883-2008, 1937-2008, 1958-2008), 'grossed-up' for a 0.65 value of imputation credits, produce a range of 5.7 to 6.2 per cent—however, while not the preferred estimation period, the AER notes that this range would have been 6.6 to 7.2 per cent had the estimation period ended in 2007,
- Survey measures strongly indicate that a MRP of 6 per cent is by far the most commonly adopted value by market practitioners—though these surveys were before the global financial crisis

[1] Economic Regulation Authority (2009a), Draft Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network, 16 July 2009, p.200.

[2] Australian Energy Regulator (2008), Explanatory Statement: Electricity Transmission and Distribution Network Service Providers, Review of the Weighted Average Cost of Capital (WACC) Parameters, December.

- Cash flow based measures currently indicate a forward looking MRP well above 6 per cent, however up until 2008 these measures consistently indicated a forward looking MRP well below 6 per cent.[3]

Based on this evidence, the AER concluded that the appropriate value for the MRP is 6.5%, flagging that the global financial crisis may mark a structural break in the MRP (that is the forward-looking MRP is above the long-term MRP that previously prevailed). Alternatively, the MRP may revert to the levels observed prior to the global financial crisis.

The Authority's own consultant, Frontier Economics (Frontier), also concluded that the appropriate range for the MRP is between 6% and 7%:

> Our view is that the long-term historical average of around 6 percent will always be within the reasonable range, in all market conditions. We are also of the view that the 7 percent proposed by GGT is not unreasonable in the current market circumstances – given present levels of dividend yields, debt spreads, and option implied volatilities. Consequently, we have adopted a range of 6 percent to 7 percent for the market risk premium. We also note that this is consistent with the recent point estimate of 6.5% adopted by the AER as part of its review of WACC parameters.[4]

In the SWIN Final Decision, the Authority refers[5] to historical estimates of the MRP that were also included in a table in the AER's Final Decision[6]. This includes several sub-periods of varying lengths, including 1883 – 2008, 1937-2008, 1958-2008, 1980-2008 and 1988-2008.

Given the MRP is inherently volatile, when examining historical estimates of the MRP there is a preference to use longer estimation periods. For example, this position was submitted by Officer and Bishop in a paper submitted by the Joint Industry Associations as part of the AER's WACC review.[7] While referencing all of the sub-periods identified above, the AER stated:

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[3] Australian Energy Regulator (2009a), Electricity Transmission and Distribution Network Service Providers, Statement of the Revised WACC Parameters (Transmission), Statement of Regulatory Intent on the Revised WACC Parameters (Distribution), p.237.

[4] Frontier Economics (2009), Review of the Weighted Average Cost of Capital Estimate Proposed by Goldfields Gas Transmission, Final Draft Report Prepared for the Economic Regulation Authority, 6 August, p.17.

[5] Economic Regulation Authority (2009b), Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network, December, para.871.

[6] Australian Energy Regulator (2009a), op.cit., p.215.

[7] Professor R. Officer and Dr. S. Bishop (2008), Market Risk Premium: A Review Paper, Prepared for Energy Networks Association, Australian Pipeline Industry Association and Grid Australia, August.

> The AER maintains its position that the 1883-onwards, 1937-onwards and 1958-onwards periods are all relevant periods for consideration.[8]

This is reiterated in its concluding statements on the MRP[9]. In other words, it references the three periods commencing 1883, 1937 and 1958 but it does not reference the two shorter periods commencing in 1980 and 1988, even though they were examined as part of its analysis.

The Authority, on the other hand, cites all five periods and hence concludes that historical estimates yield a range between 4.6% and 7.3% (if an adjustment is made for a gamma of 0.65).[10] We do not consider it appropriate to reference shorter periods when estimating the long-term MRP from historical data, and neither did the AER. If the Authority based its range on its estimates for the three longest periods, the range would be between 6.5% and 7.3% (if an adjustment is made for a gamma of 0.65). This results in a materially different outcome. In our view, these estimates from shorter periods are potentially unreliable and referencing them increases the risk of error.

The Authority notes that there is evidence of regulators applying values between 4.5% and 6%. We have examined 41 energy regulatory decisions since 2000. There are only five cases where a value of less than 6% has been applied in the final decision. Four of these decisions were made by the Authority. The only other regulator that has applied a value of less than 6% is the Independent Pricing and Regulatory Tribunal (IPART).

The Authority is the only Australian regulator that has consistently *applied* a value of less than 6% in its decisions (even if its point estimates were selected from above the mid-point of the range). Following the global financial crisis, presuming it selects an estimate from the mid-point of the range that it has proposed in the Draft Decision, its decision would merely align it with other Australian regulators prior to the crisis.

In our view, the Authority has not provided sufficient evidence to support a lower bound of the range below 6%. Particularly if it applies the mid-point of the range (which will be discussed further below), it is implying that there is an equal probability of observing a MRP between 5% and 6% and between 6% and 7%. It is clear that the weight of evidence supports a value of between 6% and 7%.

The Authority also considers that its decision to increase the upper bound of the range to 7% takes account of the impact of the global financial crisis. However, as noted above, if the mid-point of the range is taken, the MRP will be 6%, which is the estimate

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8 Australian Energy Regulator (2009a), op.cit., p.204.

9 ibid., p.236.

10 Economic Regulation Authority (2009b), op.cit., para. 872.

that has been applied by the vast majority of regulators prior to the crisis. The AER indicated that 6.5% is considered the most appropriate value for the MRP in the current market conditions.

2.2 Other evidence

A submission was made to the Authority by the Financial Investor Group (FIG) in response to the Authority's Draft Decision on Western Power's proposed revisions to its access arrangement for the South West Interconnected Network (SWIN).[11] The FIG is an affiliation of eight major Australian investors in energy network assets (including APA Group). In this submission significant concerns were raised with the proposed rate of return in that decision, which is perceived to be inadequate to support necessary investment in network infrastructure in the State.

We note that in the GGP Draft Decision the Authority has based a number of its proposed positions on the SWIN decision, particularly on issues such as the MRP and gamma. In relation to the MRP, the FIG observes:

> There is clear evidence that the Global Financial Crisis has resulted in heighted levels of risk aversion, and this could persist well into the future. On this basis, the FIG considers that there is a strong case for the ERA to lift the value of the MRP well above 6%. The FIG is of the view that the AER's decision on the MRP does not fully reflect the impact of current market conditions on the cost of equity, but is closer to the correct value than the ERA's position.[12]

We also understand another significant study has been completed by Officer and Bishop, who are both highly respected practitioners in the finance field in Australia.[13] Officer and Bishop maintain that it is important to ensure that the forward-looking rate of return is commensurate with current market conditions and that, at the current time, the forward-looking MRP is well above the historical average as a consequence of the crisis.

Concerns have previously been expressed regarding the use of forward-looking estimates of the MRP, particularly as the short-term MRP is inherently volatile. Officer and Bishop's estimates are based on the implied volatility of options on the ASX 200 and spreads on corporate debt. They consider that recent advances in the derivation of

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11 Financial Investor Group (2009), Submission to the ERA's Draft Decision on Western Power's Proposed Revisions to the Access Arrangement for the South West Interconnected Network, The Investor Perspective, September.

12 ibid., p.16.

13 Professor B. Officer & Dr. S. Bishop (2009), Market Risk Premium, Estimate for 2011 – 2015, October.

these estimates provides sufficiently reliable evidence to justify a departure from the previously used method of using a long-term historical average MRP, noting that they anticipate that it will eventually revert to this mean, at which time, it would be appropriate to revert to this long-term average value method. They consider this long-term average to be 7%.

Officer and Bishop's analysis is presented on the basis that a revised estimate is required in view of the abnormal financial market conditions that have prevailed since the commencement of the global financial crisis. However, they are not necessarily proposing that these forward-looking estimates should replace the use of the long-term historical average in 'normal' market conditions. As it is important to establish the likely persistence of this higher MRP when setting a longer term forward-looking MRP, they have also estimated the period over which they consider that this higher MRP will prevail, which is expected to be between three and five years.

They estimate the forward-looking MRP to be 11%. Their best estimate of the MRP over the horizon of the Victorian distribution businesses' regulatory period is 7% to 8%. Their recommendation is to select the point estimate from the upper end of this range.

2.3 Conclusion

GGT submitted that a MRP of 7% was reasonable based on detailed evidence submitted by the Joint Industry Associations in response to the AER's review.

We are of the view that a range of 6% to 7% is the most appropriate range for the MRP, which is supported by the Authority's consultant. Further, based on recent work by Officer and Bishop, this range is conservative and is likely to be below the forward-looking MRP that is expected to persist in the medium-term. GGT's submitted value is at the high end of this 6% to 7% range but remains a valid estimate.

3 Equity beta

A number of issues were identified by the Authority with the beta range submitted by GGT, which were mostly based on the advice of its consultant, Frontier. The key concerns that were raised that we would like to address are as follows:

1. the implications of the first principles analysis for GGP's beta;
2. the sample used to estimate the beta of the mining companies and how the estimate was applied; and
3. filtering the equity beta sample based on the t-statistic.

As the last two points are related we will deal with these two points together. We will conclude by considering the implications for the recommended beta range.

3.1 Implications of the first principles analysis

It is not possible to directly observe a firm or asset's true beta and therefore the equity beta needs to be estimated. In regulatory determinations estimates of beta are usually obtained by regressing the historical returns of the shares of a sample of comparable companies against the historical returns for a market index, over the same time period. There are two potential sources of error here.

The first is that the comparable companies are not the same as the firm or asset of interest. This will almost always be the case. However, this is particularly so with the GGP. We are not aware of any other listed gas transmission pipelines that almost solely service customers in the mining industry, recognising that the beta estimate needs to relate solely to that activity.

Second, as with any statistical estimate, it is simply an estimate and therefore there exists some measurement error. There are a number of ways to address measurement error. One way we employed is the application of a filter based on the t-statistic. This has been criticised by Frontier as introducing 'bias' into our analysis. This issue is addressed separately below.

In assessing the reasonableness of the outcomes of any statistical analysis, reference must be made to the underlying economic theory. The key purpose of the first principles analysis is to understand the key drivers of the firm's or asset's systematic risk and how it might differ from the comparable companies that have been used to estimate the beta.

We recognise that the first principles analysis is purely qualitative. It has been proposed that we need to be able to quantify the impact of some of these key factors on the beta – we agree that this is a desirable goal however this is impossible to do with any degree of acceptable tolerance.

First, what this requires is the ability to identify the impact or relevance of each key factor on each comparator firm. That may be possible in some cases but not others. For example, we would be able to find out the form of regulation the firm is subject to but we may not be able to find out data on the proportion of their revenues that are subject to take-or-pay as this may be commercially sensitive information contained in contracts. This is discussed further below.

Second, even if we have all that data, we need to be able to estimate the impact of each factor on beta in isolation. A firm's beta reflects a number of different factors (as highlighted in the first principles analysis). We could, for example, seek to estimate the impact of form of regulation on beta by comparing the betas of firms under a revenue cap with the betas of firms under a price cap, however any such conclusions could only be an approximation given there will be an infinite number of other factors at play.

The key concern that has been raised is in relation to the impact of GGP's take-or-pay protection on its exposure to volume risk. We cannot reliably estimate the potential impact of take-or-pay on beta, compared to the impact of its underlying volume risk, which is driven by its exposure to the mining sector. What we can do is attempt to ascertain the take-or-pay assumptions that are inherent in our comparators, or at least the take-or-pay protection that is assumed to apply to the 'efficient benchmark firm'. As outlined by the Authority, a comparison needs to be made with the 'average pipeline business'.

Unfortunately, however, it is extremely difficult to access information in relation to take-or-pay provisions that apply to different pipelines. The only data we have been able to access is from GGP's owner, which is the APA Group. APA owns a portfolio of gas transmission and distribution network assets in Australia.

The most relevant comparators for the 'average pipeline business' are considered to be APA's large regulated contract carriage pipeline assets, of which there are two, being the Roma to Brisbane pipeline, which is subject to full regulation under the National Gas Law, and the Moomba to Sydney Pipeline, which is subject to light regulation under the National Gas Law.

As information regarding take-or-pay protection is considered to be commercially sensitive, this is being confidentially provided to the Authority in Attachment 1 to this paper. This information shows that the take-or-pay protection for each of these

pipeline's revenues is on average, around the same as GGP (one is slightly lower, one is higher).

Frontier argues that:

> The submission points to two key aspects of the GGP pipeline – one of which would tend to increase systematic risk (cyclical commercial customers) and one which would tend to decrease systematic risk (long-term take-or-pay contracts). GGT has not presented any analysis to support its contention that the former effect dominates the latter. Moreover, no analysis has been presented to show how GGP compares with other pipelines on each of these metrics.[14]

We are not of the view that it is possible to compare the impact of one factor against the other. However, we can make some observations regarding the likely effect of each key factor relative to the 'average' firm. Beta is a measure of relative risk, that is, systematic risk relative to the market. The issue becomes does GGP have greater exposure to cyclical commercial customers than the comparator sample and does GGP have more protection via long-term take-or-pay contracts than the comparator sample.

In relation to the two key factors identified by Frontier above, we have sought to show that the nature of GGP's customer base exposes it to higher systematic risk than the average pipeline, given most other regulated pipelines service a broader end-user mix of commercial, industrial and residential customers (we do not consider it appropriate to make comparisons against other pipelines that are not regulated).

We can also say that, based on the data that we have been able to access, we have no reason to believe that the level of protection provided by GGP's take-or-pay contracts is any different from the average pipeline. Hence, one factor does not offset the other one. The net impact on beta will be driven by the first factor. Relative to other regulated gas pipelines, the impact of the second is neutral.

The extent to which take-or-pay provisions provide GGP with revenue certainty also depends on their continuing to be a contract in place. In addition to the take-or-pay data, APA has also supplied us with additional confidential information in relation to GGP's contract profile, which has been summarised in Confidential Appendix A. This information shows that there are some other contract features that expose GGP to the risk of a reduction in those contracted volumes even before those contracts expire. These features increase GGT's exposure to volume risk in the short to medium-term. It is important to note that this risk not only arises from customer default, but also from

[14] Frontier Economics (2009), op.cit., pp.25-26.

customers exercising commercial flexibility if conditions in their own markets deteriorate.

Based on this information it is not appropriate to assume that GGP has long-term revenue certainty. While we have established that GGP's take-or-pay profile is unlikely to be materially different from the 'average' regulated gas pipeline business, GGP is also exposed to the risk of a reduction in those contracted volumes even before those contracts expire.

What this also shows is the risk in relation to GGP's contracted volumes is not only about default risk. As we outlined in our previous submission, if there is a significant downturn in commodity markets, the higher cost mines will be the first to curtail their operations. The nature of mine infrastructure means that it is possible to mothball capacity for extended periods of time. We would also expect that large diversified global operations such as BHP Billiton and Rio Tinto would be particularly well positioned to maximise their commercial flexibility in this way.

Overall we recognise that the first principles analysis is a qualitative assessment and we cannot robustly estimate the impact of each factor in beta in isolation (or in combination). We have sought to take this impact into account via the weighting approach we have applied to the beta assessment (discussed below) however in the absence of a more robust methodology we also acknowledge that this is an approximation.

However, we continue to remain of the view that GGP does have higher systematic volume risk than the average regulated gas pipeline business and this arises from its unique customer profile (when compared to the average pipeline business). While our proposed approach to capture these differences is approximate, we consider that the case for a higher beta is legitimate. This is preferable to ignoring these differences altogether, which would materially increase the risk of error.

3.2 Updated comparable companies analysis

We have also updated our analysis of the comparable companies based on the sample that was used previously. As part of this, we also intend to address the following issues raised by Frontier:

- the use of t-statistics;
- the averaging approach; and, importantly
- the implications of the comparator results for GGP.

3.2.1 The use of t-statistics

As the 'true' beta cannot be observed, it must be estimated. The beta is estimated by regressing the monthly returns of the comparator business with the monthly returns of the relevant market. The estimated beta has a standard error meaning that the estimated beta falls within a range around the 'true' beta. The higher the standard error, the greater the range of estimated betas around the 'true' beta.

A high standard error means that if the beta was to be estimated again tomorrow, tomorrow's estimated beta could be vastly different. This is due to the fact that the model being employed is poor in explaining the relationship between the returns for the comparator firm and the returns for the market.

The t-statistic is commonly used in statistical analysis and is used to test the hypothesis that the regression coefficient is statistically different from zero. A key reason that it is used is because it is difficult to make judgements regarding the precision of an estimate by simply observing the standard error. While a lower standard error is preferred, there is no clear guideline or 'benchmark' for comparison. The t-statistic facilitates this relative comparison. The rule of thumb that tends to be applied is that the t-statistic needs to be greater than two for the estimate to be considered reliable, or in this case, for the concept of a linear relationship between systematic risk and return to be considered applicable.

We agree with Frontier that a low beta coefficient could lead to a lower t-statistic (as the beta coefficient is the numerator), although a low t-statistic could also arise if the standard error was very high. The exclusion of estimates with a t-statistic of two was not intended to introduce any bias into the analysis – indeed it was done with the contrary intention.

We maintain our view that observing t-statistics is important to any statistical analysis, including beta estimation. However, in order to address any potential concerns about bias, we have presented our results with and without the estimates that have a t-statistic of less than two.

The use of R-squared

We have also examined the R-squared of each estimate. The R-squared, or coefficient of determination, measures the explanatory power of the regression equation (that is, how much of the variability in the dependent variable can be explained by the independent variable). It takes a value of between zero and one. For example, an R-squared of 0.7 would suggest that 70% of the variability in the individual share's returns is explained by variability in the returns on the market.

We note that a low R-squared could legitimately reflect circumstances where the independent variable explains little of the variability in the dependent variable (that is, the returns of the market have limited bearing on the returns of the firm). However, we would still maintain that a very low R-squared, such as an R-squared of less than 0.1 (or 10%) should still be viewed with caution, as this suggests that less than 10% of the variability in the firm's returns is explained by the returns on the market. (It should be noted that there is no particular significance in this 0.1 threshold other than it is considered to be a low number.) We have therefore also reported the R-squared for each estimate along with the t-statistic.

3.2.2 Updated results

We have utilised the same sample used previously, although we continue to only include those companies for whom we could obtain sixty monthly observations of data. This resulted in some of the firms included in our previous analysis being excluded from the updated sample.

Again, we have examined Australian firms in the metals and mining sector, and firms engaged in gas transmission and distribution (which included some US firms). As outlined above, where we have averaged the estimates in the sample, we have included the results with and without the companies with t-statistics that are below two. We have also examined simple averages versus averages weighted by market capitalisation, as suggested by Frontier.

As outlined in our previous submission, it was not clear as to what the Authority's preferred approach was in relation to delevering and relevering betas (it was not published in GGP's previous decision or in its Issues Paper). In the absence of this having been published, we applied the Monkhouse approach, which has been commonly applied by the ACCC. However, as Frontier has indicated that the Authority's preferred approach is to use the Brealey-Myers formula, we have also applied that here. We have assumed a debt beta of zero.

The results are summarised in the following tables.

Table 1 Australian metals and mining (simple averages)

Sample	Average asset beta	Number in sample	Minimum	Maximum	1 standard deviation range	Number in 1 standard deviation range
All metals and mining companies	1.5015	21	0.4453	3.4820	0.646 – 2.357	14
Metals and mining – excluding low t-statistics	1.7454	18	0.5556	3.4820	0.945 – 2.546	13
All nickel, iron ore and gold companies	1.4000	11	0.4453	2.9722	0.464 – 2.336	8
Nickel, iron ore and gold – excluding low t-statistics	1.7226	8	0.5556	2.9722	0.821 – 2.625	8

Source: Bloomberg

The averages weighted by market capitalisation are materially lower:

- all metals and mining companies: 0.99
- metals and mining companies, excluding low t-statistics: 1
- all nickel, iron ore and gold companies: 0.86
- nickel, iron ore and gold, excluding low t-statistics: 0.95.

Overall, we have observed a marked reduction in the average betas in our sample of mining companies (noting that within the sample, some had fallen and some had risen). It is not clear why this is the case (we have confirmed that it is not due to the use of delevering method). It could be due to a number of factors, such as changes in average gearing levels, changes in the risk and/or composition of the market index, or changes in the risk profile of the firms themselves. What this does highlight is the inherent uncertainties associated with beta estimation.

The following table presents the results for the gas transmission and distribution firms. The table includes four US firms that were not included in our previous sample (two of which previously had t-statistics less than two and still do, which are shaded). One firm that was previously included in our sample had to be excluded as it did not have sixty months of data.

Table 2 Asset betas: gas transmission and distribution firms

Company	Equity beta	Average debt to equity	t-statistic	R^2	Asset beta
Australian firms					
APA Group	0.7633	1.4640	4.1384	0.2280	0.3098
Envestra	0.8868	3.4551	3.4022	0.1664	0.1991
US firms					
Equitable Resources	0.8331	0.4330	4.3757	0.2482	0.5814
Atmos Energy	0.5059	0.6323	4.8337	0.2872	0.3099
Southwest Gas Corp	0.7277	0.7014	5.1322	0.3123	0.4277
Chesapeake utilities	0.4314	0.4707	2.9336	0.1292	0.2933
Paciific Northern Gas	0.4318	0.6476	3.2423	0.1534	0.2621
Northwest Natural Gas	0.2395	0.4909	1.7841	0.0520	0.1606
The Laclede Group	0.0190	0.5561	0.1215	0.0003	0.0122

Source: Bloomberg

The results of this analysis are more mixed. The asset betas for APA and Envestra have not materially changed from our previous analysis. The asset betas of two of the US firms that were previously examined have increased (Atmos Energy and Southwest Gas) while one has fallen (Equitable Resources).

As outlined above, all of the firms that previously had t-statistics of less than two continue to have a t-statistic of less than two. All of these firms also had very low R-squareds (a full description of the statistics for each firm is provided in Appendix B). In fact:

- all of the firms that had a t-statistic of less than two had an R-squared of less than 0.1 (some were very close to zero);
- all of the firms that had a t-statistic of less than two had an R-squared of greater than 0.1.

While we do not consider that 0.1 has any particular significance as a threshold of acceptance, we must be concerned about the estimates that have a very low R-squared. This concern has been previously expressed to the AER by SFG Consulting as part of its WACC review:

> The key point (about which there appears to be general agreement) is that in circumstances where the R-Squared statistic is low "it is difficult to obtain

> statistically reliable estimates." In my view, this alone should lead one to (a) compute and report R-squared statistics, as is standard practice whenever using regression analysis, and (b) apply great caution in affording material weight to the resulting estimate where the R-squared statistic is low.[15]

We acknowledge that this statement is not supporting exclusion of results based on the t-statistic. However, it does question the use of estimates with low R-squared statistics.

We therefore remain of the view that it is not appropriate to place any reliance on the estimates in our sample that have t-statistics of less than two - and also happen to have extremely low R-squareds - particularly where our sample size is reasonably small.

3.2.3 Implications of comparator results for GGP

Lower bound

Overall, we do not consider that our updated estimates for the gas transmission and distribution firms alter our previous conclusion that an appropriate asset beta for these firms is 0.4. We do not accept that the AER's decision in relation to electricity transmission and distribution forms an appropriate lower bound for GGP's range, because:

- it is generally recognised that the average gas transmission and distribution firm has a different (higher) risk profile than electricity; and
- based on the experts' submissions that have been made to the AER by the Joint Industry Associations regarding the quality of the data the AER has relied upon, considerable concerns remain regarding the robustness of its equity beta estimate.

In coming up with a lower bound for the range we do not consider it appropriate to reference a sample that includes electricity transmission and distribution. We are of the view that a sample that is limited to gas transmission and distribution is more relevant to GGP. Our analysis estimated the average asset beta for this sample to be 0.4 and we consider that this should be the lower bound of the range. Our assessment of the updated data has not changed this conclusion.

[15] SFG Consulting (2009a), The Reliability of Empirical Beta Estimates: Response to AER Proposed Revision of WACC Parameters, Report Prepared for ENA, APIA and Grid Australia, para 141.

Upper bound

In relation to our sample of mining companies, it is evident that the average betas of our sample have fallen materially since our previous analysis was undertaken (although within the sample, some had fallen and some had risen). The reason for this is unclear. However, we must rely on the most recent market data.

Frontier recommended that the average betas were weighted according to market capitalisation. If this is done, the averages will be dominated by BHP Billiton and Rio Tinto, who are also major customers of the pipeline.

APA has advised that BHP Billiton and Rio Tinto are typically not the actual contracted users. Typically, the contracting party is a subsidiary that is based at a single location and/or mines a single commodity type, rather than a large diversified company and would reasonably be expected to have a higher equity beta. It is also understood that there are typically no ultimate parent company guarantees.

We agree that more weight could be placed on these two companies. However, if the market capitalisation approach is applied, it assumes that these two companies account for over 85% of GGP's revenue. Based on information provided by APA, they currently account for approximately 50% of GGP revenue. Weighting by market capitalisation over-weights these companies. We therefore propose to determine our mining company beta estimate by weighting as follows:

- 50% is based on the average asset betas of BHP Billiton and Rio Tinto (which is close to one); and
- 50% is based on the (simple) average asset beta of our nickel, gold and iron ore sample, still excluding the firms with t-statistics less than two. As outlined in our previous report, these producers are more relevant to GGP.

The resulting asset beta for the Australian mining company sample was 1.36.

We then used the same method applied in our previous report to estimate the upper bound equity beta based on this data. This method weighted the average betas from the gas and mining samples based on the proportion of GGP's revenues that are subject to contractual take-or-pay provisions. That is:

- a 17% weight was applied to the average mining sector beta (1.36) as this approximates the proportion of revenues that are exposed to volume risk;
- the balance of 83% was applied to the average asset beta for gas transmission and distribution pipelines (0.4).

This results in an asset beta of around 0.56, which is equivalent to an equity beta of 1.4 (assuming 60% gearing and applying the Authority's favoured relevering method).

We concur with Frontier that this is an approximation. We highlighted the issues with being able to precisely come up with such an estimate in our previous report. However, as outlined above, we consider that it is better to try and develop an estimate that has some logic, rather than arbitrarily selecting a value.

3.3 Conclusions

In this analysis we have sought to address the Authority's comments regarding the potential impact of take-or-pay on GGP's beta estimate, although there is limited publicly available data on the take-or-pay provisions in pipeline contracts. We have examined two of APA's other large regulated pipelines, whose average take-or-pay protection approximate GGP's. On this basis, we have concluded that the extent to which take-or-pay provisions mitigates GGP's volume risk is no different from other large regulated gas pipelines.

What is different is the nature of the residual volume risk to which GGP is exposed to. This was discussed at length in the previous submission and will not be represented here.

We have also updated the beta analysis and re-estimated our average asset beta for the mining sector by giving more weight to the BHP Billiton and Rio Tinto estimates, as suggested by Frontier. However, rather than weighting them by market capitalisation, we have weighted them in accordance with their approximate contribution to GGP's revenues.

Overall, we therefore conclude that an asset beta of between 0.4 and 0.56 (which is materially lower than our previous upper bound) is appropriate for GGP. This corresponds to an equity beta of between 1 and 1.4 (using the Authority's preferred relevering method). The equity beta that is implicit in the Authority's 2005 decision for the GGP (which was based on the 75th percentile of the range) is within this range.

4 Gamma

We see significant problems with the Authority's decision in relation to gamma. The discussion on this parameter in the Draft Decision is limited and primarily restates the rationale for adopting the AER's recommended parameters (although the Authority has applied more precision in interpreting the AER's range), including aligning GGP with its decision relating to the SWIN.

There is little if any discussion of GGP's proposal, or the volume of material submitted by the Authority's own consultant, Frontier Economics. In particular, there is no feedback provided as to why values below 0.5 (and indeed a value of zero) are not considered to be within the bounds of a reasonable range.

Further evidence has emerged following the release of the AER's final WACC decision that raises serious and fundamental concerns with all of the key parameters underpinning the AER's gamma estimate, including:

- its assumed distribution rate; and
- the lower and upper bound values for franking credits.

Each of these is discussed below.

4.1 Distribution rate

In the AER WACC review process the Joint Industry Associations (JIA) submitted a volume of material that questioned the appropriateness of the AER's decision to adopt a payout ratio of 100% (compared to the market average of 71%). The JIA put forward a number of arguments as to why this was considered inappropriate, including demonstrating that retained imputation credits have little or no value to investors.[16] Based on its own analysis, the AER concluded that the time value loss associated with the value of imputation credits was not a material issue. Accordingly, it maintained its view that a distribution rate of 100% was appropriate.

Following the finalisation of the AER's Statement of Regulatory Intent, ETSA Utilities has commissioned Professor Bob Officer to review the estimation of the distribution

[16] Refer: NERA (2009), AER's Proposed WACC Statement – Gamma, A Report for the Joint Industry Associations, 30 January.

rate as part of its regulatory proposal to the AER.[17] Officer disagrees with the AER's conclusion that the time value loss where credits are retained is not material:

> The only time when the franked dividends attached to retained earnings (the franking account balance) have any value is when they are distributed. Moreover, the only time in which any of them would be distributed would be when the payout ratio is greater than 100%. Empirical evidence demonstrates that the overall distribution rate is significantly below 100%.[18]

He concludes:

> Assumptions of 100% distribution are unrealistic and not correct since a significant proportion of the franking credits are probably never distributed as franked dividends. It is incorrect to assume that all credits are eventually distributed...Long term averages estimate the economy wide distribution rate at about 70% and listed companies rarely exceed this rate.[19]

In its recent Draft Decision for ETSA Utilities the AER rejected this response based on the advice of its consultant, Associate Professor Handley.[20] Handley continues to place reliance on theoretical assumptions, for example, that imputation credits are perpetuities, which in turn implies no growth, which in turn implies full distribution at the end of each period (noting that we consider that the assumption that no growth means full distribution of credits at the end of each period is an unreasonable extension of logic). He indicates that:

> …in order to analyse highly complex issues simplifying assumptions are used in theoretical models to gain a better understanding of the workings of financial markets.[21]

There is also a risk that these simplifying assumptions result in an outcome that is too far an abstraction from reality. The alternative to making these assumptions is to apply the market average which is readily observed in practice, and is widely applied by market practitioners. Instead, debate continues to focus on assumptions which may or may not have been implied.

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17 Professor R. Officer (2009), Estimating the Distribution Rate of Imputation Tax Credits: Questions Raised by ETSA's Advisers, 23rd June.

18 ibid., p.1.

19 ibid.

20 Australian Energy Regulator (2009b), Draft Decision, South Australia: Draft Distribution Determination 2010-2011 to 2014-15, November.

21 ibid., p.260.

It is therefore considered that the AER's assumed distribution rate is fundamentally flawed and should not be relied upon by the Authority. The Authority's consultant, Frontier, also disagrees with the AER's assessment:

> Our view is that the role of the regulator is to estimate the cost of capital as it is in the real world, and that gamma should be estimated on the basis of the observed dividend payout practice of Australian firms and not on the basis of a hypothetically assumed one that is inconsistent with the empirical data.[22]

We therefore consider that the distribution rate should be based on the average distribution rate that is observed in the market and is most commonly applied by practitioners, which is 71%.

4.2 Lower bound

The AER arrived at its preferred value for gamma of 0.65 based on a lower bound estimate for theta of 0.57 and an upper bound of 0.74 (and then applying a distribution rate of 100%).

In arriving at its lower bound estimate, the AER solely relied upon a single study that sought to estimate the value of franking credits from market data, (that is, a 2006 study by Beggs and Skeels). In doing this, the AER dismissed a number of reputable Australian studies, some of which concluded that the value of franking credits is zero or close to zero.

Further, a number of significant concerns were identified with the Beggs and Skeels study in two consultants' reports submitted to the AER by the JIA.[23] One of these studies, being the report by SFG Consulting (SFG), sought to simply extend Beggs and Skeels' sample period to September 2006, making no other changes to the methodology or assumptions they applied, and arrived at a very different estimate for the value of franking credits, being 37%. This further highlights both the inherent uncertainty and volatility in determining cost of capital parameters and the cost of capital, and also the potential for increased regulatory risk in cost of capital determination, particularly where regulatory discretion is used to selectively use data which supports the regulator's pre-determined position.

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[22] Frontier Economics (2009), op.cit., p.19.

[23] SFG Consulting (2009b), The Value of Imputation Credits as Implied by the Methodology of Beggs and Skeels (2006), Report Prepared for ENA, APIA and Grid Australia, February; Synergies Economic Consulting (2009), Peer Review of SFG Consulting Reports on Gamma, A Report to the ENA, APIA and Grid Australia, January.

As part of its regulatory proposal lodged following the conclusion of the AER's Statement of Regulatory Intent, ETSA Utilities also submitted a paper by one of the authors of the study the AER relied upon (Skeels).[24] Skeels was asked to review the extension of the Beggs and Skeels analysis conducted by SFG and submitted to the AER, as cited above, as well as the AER's subsequent response to that analysis in its final Statement of Regulatory Intent. As part of its review of the SFG analysis, Skeels directed a number of questions to SFG, which were then responded to.

On reviewing the AER's dismissal of the SFG Consulting study, Skeels concluded that:

> Many of the criticisms raised by the AER were little more than allusions to potential problems with the SFG analysis. In some cases I found that these allusions were ill-founded and readily dismissed. In other instances the appropriate response was to rework the model and to actually establish whether the concern was valid or not. This latter class of concerns was incorporated into the questions posed to SFG. I found their response to be convincing in as much as the potential problems were demonstrated to have little or no material impact on the results.[25]

Skeels noted that some of the concerns that had been raised about the SFG study were more material. SFG responded to these issues and produced revised estimates. SFG arrived at a value of theta of 0.23. Skeels stated:

> ...the SFG estimate of theta of 0.23 represents the most accurate estimate currently available.

Skeels concludes as follows:

> It is clear that the more recent data used in the SFG results presented in Appendix I favour an estimate of theta that is lower than that of 0.57 which was obtained by Beggs and Skeels on the basis of less recent data. However, it might be argued that the minor methodological differences that remain between the methodology of Beggs and Skeels (2006) and that of SFG bias their estimate of theta downwards... Were such a position to be taken then, in my opinion, a compelling case can be made that the empirical evidence overwhelmingly supports the notion that the true value of theta lies between the SFG estimate of 0.23 and the Beggs and Skeels (2006) estimate of 0.57, and that in all probability it lies closer to 0.23 than 0.57.[26]

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[24] C. Skeels (2009), A Review of the SFG Dividend Drop-off Study, 28 August.

[25] ibid., p.4.

[26] ibid., p.5.

The AER has largely dismissed the comments made by Skeels in its recent Draft Decision for ESTA Utilities, notwithstanding that Skeels is one of the co-authors of the single study that they continue to place sole reliance upon.[27] At a minimum, the SFG study casts significant doubt over the precision (and authority) that the AER is now applying to the Beggs and Skeels' estimate and the inherent uncertainty that prevails in relation to the 'true' value of theta. The SFG study was largely based on the methodology applied by Beggs and Skeels (with the 2009 version of the study specifically responding to methodological issues that had been identified by Skeels) however is based on a larger, more recent dataset. Skeels has also agreed that the SFG estimate of 0.23 could be closer to that 'true' value.

In our view the paper by Skeels provides significant and compelling evidence to question the AER's sole reliance on the conclusions from Beggs and Skeels 2006 study and its dismissal of SFG's extension of that study using updated data. At minimum, it also provides further support that SFG's estimate of theta of 0.23 should be included in the reasonable range of values. Hence, even if the AER's distribution rate of 100% was accepted (which neither Synergies nor GGT support), the value for gamma submitted by GGT (0.2) should be considered to be within reasonable bounds.

In its report, the Authority's consultant, Frontier, highlighted further issues with the Beggs and Skeels (2006) study that were highlighted by SFG in its previous responses to the AER.[28] It was shown that the regression analysis used to generate the value of franking credits will also generate an estimated value for cash dividends. For the most recent period, that value was 80 cents in the dollar.

Frontier highlights that under the standard CAPM it must be assumed that dividends are valued at their full face value (that is, one dollar). If Beggs and Skeels' 2006 results are recalculated assuming that each dollar of dividends was valued at one dollar (rather than 80 cents), the value of franking credits is close to zero.

4.3 Upper bound

Material submitted by the Joint Industry Associations showed widespread rejection of the AER's reliance on tax statistics in setting its upper bound for theta. We agree that such an analysis cannot be used to determine a value for theta.

However, even if this method was to be adopted, there are some fundamental questions regarding the estimates that were derived in the single study relied upon by

[27] Australian Energy Regulator (2009b), op.cit.

[28] Frontier Economics (2009), op.cit.

the AER, which was by Handley and Maheswaran (2008). In Handley and Maheswaran's analysis they estimate the proportion of redeemed franking credits to the total amount of franking credits that were distributed.

Taxation statistics measure the quantum of corporate taxation, the amount of franking credits distributed and the amount of franking credits claimed. These statistics do not form the basis of an accepted method for valuing gamma. The statistics, such as the amount of franking credits claimed, do not value the credits. The statistics do not take into consideration the risk that shareholders bear in earning the dividends and credits. Therefore the statistics merely establish a hypothetical upper bound for theta. In our view, a study based on taxation statistics should not have been given such significant weight by the AER.

The Authority's consultant, Frontier, is critical of the approach used by Handley and Mahesawaran and concludes that:

> …average redemption rates should be considered to have no relevance to empirically estimating from market data the effect that franking credits have on the cost of capital of Australian firms.[29]

While we do not endorse the use of tax statistics to value gamma for the reasons outlined above, we have undertaken our own analysis of published tax statistics, which is reproduced in Appendix C. Using the available data from 2003 to 2007, we quantified the amount of the credits created, the amount distributed and the amount claimed by taxpayers. The analysis revealed that:

- if a payout ratio of 100% is applied (although this is not accepted), the maximum upper bound for gamma would be around 0.35; and
- if a payout ratio of 71% is applied (based on Hathaway and Officer's findings re the market average payout ratio), the maximum upper bound for gamma would be 0.23.

These results differ markedly to the results of the Handley and Maheswaran study. We have been unable to reconcile the differences because the data Handley and Maheswaran have used is not published in their study.

The AER engaged Associate Professor Handley to review this study and his conclusions are published in the recent Draft Decision in relation to ENERGEX and

[29] ibid., p.21.

Ergon Energy.[30] While we have not yet had the opportunity to analyse Handley's assessment in detail, we do not agree with all of the statements made by Handley. For example, claims are made in relation to double counting however given we used net tax in our analysis (after adjusting for intercompany dividend distributions and offsets etc) we do not necessarily agree that this claim is valid. However, to the extent that this had occurred, it is possible to infer from the Australian Tax Office's statistics that this would be less than 2% and hence the impact on our results would be immaterial.

The claim that has been made that we do agree with is that our dataset is different to the dataset used by Handley and Maheswaran (our data was provided in full to the AER). While we do not consider that the explanation made by Handley for the difference is plausible (particularly the double counting issue), access is needed to the dataset that was used in order to identify and understand the differences. Indeed, we cannot confirm that Handley and Maheswaran's analysis had addressed the criticisms made of our study.

We are not proposing that the estimates from our study can be used to value theta because we do not consider this to be an acceptable method. However, to the extent that this method has been relied upon the results our analysis casts considerable doubt on the evidence which has been relied upon by both the AER and (as a consequence of this) the Authority. This is considered of fundamental importance given the degree of reliance placed on the Handley and Maheswaran study by the AER. This study appeared to be integral in justifying the AER's increase in gamma from 50% to 65%. Similarly, through the AER decision, the study has influenced a material shift in the Authority's position on gamma.

4.4 Conclusions

There are fundamental concerns with each of the parameters underpinning the AER's gamma estimate. We are also concerned that the Authority does not appear to have given any serious consideration to the proposal submitted by GGP, which also happens to be consistent with the advice provided by its own consultant. Frontier concludes the following:

> In our view, zero must be included within the reasonable range for any estimate of gamma. Consequently, we adopt zero as the lower bound for our reasonable range. Our view is that the upper bound of the reasonable range should be set at 0.4. This is based on:

[30] Australian Energy Regulator (2009c), Draft Decision, Queensland: Draft Distribution Determination 2010-11 to 2014-15, November.

(a) An estimate of 0.57 for theta, and an estimate of 0.7 for *F*. That is, even if one fully accepts the single result from Beggs and Skeels (2006) on which the AER focuses and ignores the fact that it is conditional on dividends being valued at 80% of face value, this must be adjusted to reflect the extent to which firms actually distribute franking credits. Note that 0.57 x 0.7 = 0.4.

(b) The ERA's last estimate for gamma of a range of 0.3 to 0.6 and the need for a degree of regulatory stability.

Consequently, we consider the estimated value for imputation credits of 0.2 by GGT to be appropriate and that a reasonable range for this parameter, based on all of the evidence and analysis that is now available, is 0 to 0.4.

Based on the evidence provided above, we consider that GGT's proposed gamma of 0.2 is considered reasonable.

5 Debt margin

5.1 Credit rating

Synergies' previous report on the proposed cost of debt examined a sample for rated owners and operators of pipeline infrastructure. With the exception of one firm (GasNet Australia Operations), all of the firms were rated BBB-. It is noted that these ratings still apply and that Gas Net Australia Operations is no longer in the sample. APA Group, which was not rated when the revised access arrangement was submitted in March, has since obtained a BBB rating for Standard and Poor's (noting that this business is considerably larger and more diversified than GGP). The rationale for focussing on firms that own and/or operate pipeline infrastructure is that their risk profile will be more comparable to GGP.

In reviewing the analysis the Authority's consultant, Frontier, considered the analysis undertaken by the AER as part of its review of the WACC parameters to apply to electricity transmission and distribution. This included reviewing a sample of energy transmission and distribution businesses (including gas and electricity). The AER concluded that a rating of BBB+ was appropriate for electricity transmission and distribution although Frontier noted:

> However, the AER did note that "gas networks are exposed to more volume risk" and that this has a potential impact on their credit ratings.[31]

It then observed that this exposure to volume risk was:

- exacerbated by having customers that were significantly exposed to cyclical economic conditions; or
- mitigated by take-or-pay arrangements.

It considered that an appropriate range for GGP would be between BBB and BBB+ based on the comparators but it did not explicitly consider the implications of GGP's risk profile on its credit rating. It also suggested that an analysis of financial ratios (such as interest coverage) should also be undertaken.

The Authority rejected the notion of a range and is proposing to maintain a rating of BBB+. It has indicated that there is no evidence to suggest that GGP's rating should

[31] Frontier Economics (2009), op.cit.

change from BBB+, although there is no discussion of the evidence submitted by GGT, in particular, that most of the gas firms in the sample put forward currently have ratings of BBB-. Indeed, it is not apparent to us that this evidence has been considered at all. Instead, GGP's notional credit rating is aligned with the rating that is applied to electricity transmission and distribution. There is no discussion by the Authority of the potential volume risk differences between gas and electricity, or whether GGP's risk profile may also differ from the average gas pipeline business. We are of the view that there is a difference and this is considered in more detail in the discussion on beta below.

In accordance with Frontier's suggestion, we have also examined interest coverage ratios based on GGP's projected regulated cashflows. As noted by Frontier, Envestra's interest coverage ratio has been about 1.6 times.[32] Envestra is considered the most relevant comparator to GGP in this sample (because it owns gas network assets) and is currently rated BBB-. Standard and Poor's also publishes indicative ratios for key ratings categories for the utilities sector (which is a broader industry definition than examining gas alone). For transmission, the indicative interest cover ratios are:

Table 3 Standard & Poor's indicative interest cover ratios for transmission utilities

AA	A	BBB
3 - 4 times	2 - 3.3 times	1.5 - 2 times

Source: Standard and Poor's, Utilities: International Utility Ratings and Ratios, http://www2.standardandpoors.com/portal/site/sp/en/au/page.article/2,1,1,0,1204836566546.html?vregion=au&vlang=en, accessed 30 October 2009.

Envestra's ratio is consistent with these guidelines, noting that the overall credit rating will be influenced by a number of factors.

Based on GGP's projected cashflows, our estimated interest coverage ratios[33] are shown below. The analysis is clearly be sensitive to the assumptions made, including that the regulated revenue allowance estimated by GGP is approved by the Authority.

[32] Based on Funds from Operations (FFO) to Interest Cover.

[33] The calculation of the interest cover ratio using Funds From Operations (FFO) as the numerator reflects assumptions made as to the tax expense of the firm. The regulatory modelling framework used by the ERA is based on a pre tax nominal framework with the asset base expressed in historic dollars (that is, dollars of the day in which the expenditure was incurred). It is understood that the WACC is grossed up to reflect the impact of the statutory tax rate (30%). In calculating the interest cover ratio, we have assumed that tax depreciation is equivalent to regulatory depreciation with tax expense calculated using the statutory tax rate. It is recognised that actual tax depreciation is likely to vary from regulatory depreciation although it is not clear whether it will be higher or lower in the current circumstances given that the pipeline was commissioned in 1996 and some initial accelerated tax allowances are likely to have already expired. However, interest cover ratio calculations are relatively insensitive to this factor with a plus or minus 20% difference between regulatory and taxation depreciation having less than a 2% impact on interest cover ratio.

Table 4 Projected interest coverage for GGP (times)

2010	2011	2012	2013	2014
1.77	1.79	1.82	1.84	1.86

In our view, this supports a rating of no higher than BBB. However, as outlined above, there are a number of factors that contribute to the assessment of the credit rating and to make a conclusion based on this ratio alone would be an extreme simplification of the actual ratings assessment process. We therefore agree with Frontier that it is appropriate to consider this in terms of a range.

As outlined above, APA, which was not rated at the time our sample was initially constructed, now has a rating of BBB. APA is a large company holding a diversified network of gas pipeline assets across Australia. The Authority 's assessment of GGP's rating as BBB+ implies that GGP is less risky than the much larger and more diversified APA Group. Such a position seems unsustainable. A more reasonable assumption would be that on a stand-alone basis, GGP's rating would be lower than APA's rating, given its customer base is considered riskier than the average gas pipeline business. Otherwise, we do not consider it reasonable to assume that it is rated any higher than BBB.

The three remaining rated gas businesses from our original sample are all rated BBB-. This provides further strong support for a rating for GGP of BBB-. We therefore consider that this should be the lower bound of our range. It is not clear to us why these comparators should be excluded from the bounds of a reasonable range. The upper bound of our range is BBB.

5.2 Estimating the debt margin

5.2.1 Recent developments

A significant issue has emerged since GGP's regulatory proposal was submitted. To date, the method that has been used by a number of regulators[34] to estimate the cost of debt for ten year BBB issuer was using the longest available Bloomberg BBB yield, which was an eight year rate, and then adding the difference between the eight and ten year A yield (also published by Bloomberg). As of the middle of August 2009, these rates are no longer published by Bloomberg due to the lack of market data. The longest indicative BBB rate now published by Bloomberg is a seven year rate.

[34] This has been consistently applied by the ACCC and AER, with the exception of the most recent AER decisions, which will be discussed further below.

Even prior to this occurring, it was well known that there were problems with this method. The AER has acknowledged that the Bloomberg-based method is likely to underestimate the cost of BBB debt. However, the other alternative independent data source, being CBA Spectrum, has previously been rejected by the AER because of concerns that it is overestimating the cost of BBB debt. As observed by Frontier[35], while both methods were seen to have issues, the AER assigned no weight at all to the CBA Spectrum estimate as it was seen to over-estimate the cost of debt by more than the extent to which Bloomberg is underestimating it. The other practical difficulty that is faced is that it appears that CBA Spectrum data can no longer be accessed by non-CBA customers (we have been unable to access this data for GGP).

Frontier's recommendation was that a mid-point of the Bloomberg and CBA Spectrum estimates should be applied. This recommendation was made prior to the cessation of publication of the Bloomberg yields.

The AER has also since changed its position on this issue. In its final determination in relation to the Victorian Advanced Metering Infrastructure Review (AMI), released on 30 October 2009, the AER has applied the mid-point between Bloomberg and CBA Spectrum. It the decisions it has released since then, which include ACTEW AGL (gas distribution), Country Energy (gas distribution), and ENERGEX, Ergon Energy and ETSA Utilities (electricity distribution), it has solely relied upon CBA Spectrum. The outcomes from these decisions are summarised in the following table. It is important to note that in all of these decisions the assumed notional credit rating was BBB+.

Table 5 Debt margins applied in recent AER decisions

Decision	Method	Debt margin
Victorian Advanced Metering Infrastructure (Final)	Average of Bloomberg and CBA Spectrum	400 basis points[a]
ACTEW AGL (Draft)	CBA Spectrum	428 basis points
Country Energy (Draft)	CBA Spectrum	424 basis points
Ergon Energy, ENERGEX (Draft)	CBA Spectrum	424 basis points
ETSA Utilities (Draft)	CBA Spectrum	429 basis points

a An allowance of 413 basis points was quoted in this decision, but that also included a 12.5 basis point margin for debt raising costs

Consideration therefore needs to be given as to what the issues associated with estimating the debt margin mean for GGP. We note that the Authority intends to develop a method to address this issue in time for the Final Decision.

35 Frontier Economics (2009), op.cit.

5.2.2 Analysis

The fundamental problem is a lack of market data that can be used to estimate the cost of debt for a ten year BBB. The problem is not limited to BBB. As outlined above, Bloomberg has also ceased publishing longer term yields on A-rated debt and has not published a ten year AA rate since 2005. The only ten year rate it now publishes is AAA.

The following table shows the sample of bonds that Bloomberg currently uses to estimate its BBB yield curve.

Table 6 Current set of BBB bonds used by Bloomberg to construct its yield curve

Issuer	Maturity
SNOWY HYDRO LIMITED	25/02/2010
CITIPOWER I PTY LTD	28/02/2010
MIRVAC GROUP FUNDING LTD	15/03/2010
FGL FINANCE AUSTRALIA	17/03/2010
CHALLENGER TREASURY LTD	23/04/2010
BRISBANE AIRPORT CORP	30/06/2010
MIRVAC GROUP FUNDING LTD	15/09/2010
GPT RE LTD	7/11/2010
BANK OF QUEENSLAND LTD	2/12/2010
DEXUS FINANCE PTY LTD	8/02/2011
PUBL & BROAD FINANCE LTD	6/05/2011
ENERGY PARTNERSHIP GAS	29/07/2011
TRANSURBAN FINANCE CMPNY	15/09/2011
ORIGIN ENERGY LIMITED	6/10/2011
TABCORP INVESTMENT NO 4	13/10/2011
SYDNEY AIRPORT FINANCE	21/11/2011
COLES GROUP FINANCE	25/07/2012
HOLCIM FINANCE AUSTRALIA	7/08/2012
CLP AUSTRALIA FINANCE	16/11/2012
SNOWY HYDRO LIMITED	25/02/2013
GPT RE LTD	22/08/2013
LEIGHTON FINANCE LTD	28/07/2014
WESFARMERS LTD	11/09/2014
SANTOS FINANCE LIMITED	23/09/2015
BBI DBCT FINANCE PTY	9/06/2016
NEW TERMINAL FINANCING	20/09/2016

Source: Bloomberg, as at 16 October 2009

The longest maturity issues are just under seven years and there are only two instruments with this maturity. The longest BBB yield that Bloomberg now publishes is

a seven year rate. However, inclusion of an instrument in the sample does not mean that current yields can be sourced for that issue, as this depends on trading activity.

Both Bloomberg and CBA Spectrum face this same problem. Each data provider uses a different method to fit their yield curves to the data, which is reflected in the historical difference between their published yields. As the method used by each data provider is proprietary it is not possible to directly compare them or understand what might be driving the differences. The AER notes:

> In the absence of a full understanding of either method, many of the arguments presented are based on conjecture and do not form a sound basis on which to determine the reliability of Bloomberg's (or CBA Spectrum's) fair value estimates.[36]

There may also be alternative ways to fit the curve to market data, which we have not investigated in any detail here.

While Bloomberg references a sample of instruments in developing its BBB yield curve (including a couple of instruments with close to seven years to maturity), if there are no secondary market trades in those instruments it will not have data points to use to fit the curve.

The reliability problems with Bloomberg have now been acknowledged by the AER:

> Bloomberg's recent decision to cease publishing an 8-year BBB fair yield curve appears to represent an acknowledgement that its curves are an unreliable indicative of the true value of longer term corporate bonds.[37]

However, as the estimation period in this particular determination pre-dated the cessation of publication of these rates, the AER has not yet addressed how the Bloomberg rate will now be estimated. It did also note that as the methods each data provider uses is not transparent, it is investigating developing alternative methods to estimate the debt margin.

Options for estimating the cost of debt

In our view, there is no clear solution to this problem given the underlying driver is the lack of Australian market data. While CBA Spectrum still publishes a ten year rate, it is extrapolated from yields on shorter maturity instruments. The question therefore largely becomes one of how to extrapolate observed yields on actual issues (or how to

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[36] Australian Energy Regulator (2009d), Final Determination: Victorian Advanced Metering Infrastructure Review, 2009-11 AMI Budgets and Charges Applications, October, p.120.

[37] ibid., p.118.

'fit the curve' to the available data), which will only be from shorter terms, to estimate a ten year BBB rate. This question is currently being considered by a number of regulators, including the Authority and AER.

In the meantime, we have identified a number of different options, which are briefly discussed below.

1. CBA Spectrum ten year rate

CBA Spectrum is the only independent data provider that currently estimates indicative yields on ten year BBB debt. Given the lack of market data, considerable discretion must still be applied in constructing its yield curve. The data is only available to CBA customers and hence is not readily accessible. As outlined above, in its most recent decision where it has had to estimate a cost of debt, the AER is proposing the estimate a simple average of CBA Spectrum and Bloomberg data. It therefore no longer rejects the use of this data in estimating a cost of debt in the current market environment. Indeed, as outlined above, in its most recent decisions released since the beginning of November it has solely relied on CBA Spectrum to estimate the debt margin.

2. Use longest published Bloomberg BBB bond yield and extrapolate based on next available ten year rate

There are two methods that could be applied here. The first is to apply a method that is consistent with the approach that has been applied historically, which is to extrapolate based on the next lowest credit rating category for which Bloomberg continues to publish a ten year rate.

The longest available Bloomberg BBB rate is currently seven years. The only credit rating category for which ten year yields are published is AAA. The seven year BBB rate could therefore be extrapolated based on the difference between the ten year and seven year AAA yields. This is similar to the method that has previously been applied to estimate a ten year BBB rate.

There are some difficulties in assuming that the term structure of the AAA yield curve can be used to estimate the term structure of the BBB yield curve. This is for two reasons. First, the sample will include issuers other than Australian corporates. The majority of the sample consists of banks, reflecting the Commonwealth Government's guarantee.

Second, lenders are likely to be much more willing to lend to a AAA borrower for a ten year term than a BBB. If anything, referencing AAA data is more likely to understate

the term structure of a BBB rather than overstate it, and hence should be considered conservative. In saying this, the A curve, that has been utilised for some time in extrapolating the BBB curve, has been extremely flat and we expect that this is driven by the lack of bond issues at this end of the curve. The main advantage of referencing Bloomberg's longer term AAA yields is that they are more likely to be based on actual bond issues and hence reflect actual market data.

We do however note that the difference between the AAA seven and ten year Bloomberg yields has been particularly high. For example, over October and November, the average spread was 56 basis points. We therefore consider that this estimate should be treated with caution.

An alternative method is simple linear interpolation. This assumes that the slope of the yield curve is constant. For example, based on the BBB data published by Bloomberg, its indicative seven year rate could be extrapolated based on the difference between the five and seven year rate (as will be shown below, historically there has been a very strong correlation between spreads on five and ten year BBB bonds (relative to the risk-free rate) and this has continued since the commencement of the crisis.

Clearly, the assumption that the slope of the yield curve is constant is limiting. However, we consider it reasonable to consider an estimate derived in this way alongside other methods.

We note that the Authority has used this method in its Final Decision in relation to the SWIN (along with CBA Spectrum). However, it has also proposed the use of a third method that seeks to adjust the spread between the AAA seven and ten year bond yields based on the ratio of the spread between seven and ten year A-rated bonds and seven and ten year AAA-rated bonds for the period 1 August 2007 to 18 August 2009 (that is, it has taken a long-term average for the period prior to the cessation of publication of the ten year A bond yield).[38]

The consequent downward adjustment to the debt margin after this method was applied implies that the spread between seven and ten year A was lower than the AAA spread. This seems opposite to what economic theory would predict. It is reasonable to expect that long-term bonds with a lower credit rating would have less liquidity than a AAA bond with the same rating, and that investors in these lower rated bonds would require a higher premium to compensate them for the higher perceived risk.

The Authority notes that the spreads between the seven and ten year A and seven and ten year AAA bonds were "quite consistent in early 2007 and early 2008" and then

[38] Economic Regulation Authority (2009b), op.cit., pp.232-233.

diverged.[39] The Authority therefore considers that the difference between the seven and ten year AAA must not be a good proxy for the spread between seven and ten year BBB and therefore requires an adjustment.

While we agree that are potential weaknesses in using the AAA spreads as a proxy, we do not agree with the Authority's proposed method to adjust for it. The main reason for this is that we have considerable doubts as to whether the published fair value data for the long-term A rated bonds is reflective of the actual cost of debt for those bonds, given liquidity all but dried up for lower investment grade credits as a consequence of the global financial crisis.

As has already been observed for BBB bonds, even prior to the cessation of publication of Bloomberg's eight year BBB fair value bond yield in August 2009, that eight year estimate was usually based on observed yields on bonds with considerably shorter maturities – it is reasonable to assume that this was the key reason that it ceased publishing this data. Similar problems have underpinned its sample of A-rated bonds.

The information content contained in the fair value bond yields depends on the extent to which there are actual trades in these bonds in the market. If the market is not liquid, this means that there are few (if any) transactions in these instruments and hence market prices are not being updated to reflect current information. As outlined above, it is well known that with the deepening of the global financial crisis, these transactions were not occurring in longer-term corporate bonds (particularly for low investment grade instruments). In observing the divergence between the AAA and A spreads the Authority's assumption is that the AAA is not indicative. However, it is also possible that the 'fair value' A-rated bond spreads significantly understate what the actual spreads between seven and ten year A-rated bonds would have been, because there is no liquidity in this market.

The Authority's adjustment would be considered a reasonable one if there was liquidity in the market for A-rated debt. However, Bloomberg's decision to also cease publishing the long-term fair value yields for A-rated debt highlights the problem (and in any case if there was data on A-rated bonds, an adjustment based on AAA would not be required). While we agree that the spread between seven and ten year AAA is not an ideal proxy, the adjustment proposed by the Authority is not considered an appropriate way to address it. Because of these potential estimation issues we would not recommend solely relying on this method to produce an estimate of the debt margin.

[39] ibid., para.853.

3. Construct a yield curve from market data using some other method

In May 2009 the Independent Pricing and Regulatory Tribunal (IPART) released an Issues Paper on options for estimating the cost of debt. One of the options it considered was some form of extrapolation based on an empirical method to estimate the term structure on corporate debt. It engaged Professor Erik Schlogl to come up with this method. We do not consider it appropriate to use an approach which is not transparent to all, is unable to be readily replicated and has as its justification anecdotal evidence.

IPART's approach will rely upon Krishnan[40] (2008) where credit spreads were estimated over a period from 1970 to 2005. It is important to realise that during this time both Bloomberg and CBA Spectrum did report BBB spreads and that the two reporting services provided estimates that were close to one another. The estimates were close as the corporate debt market was more liquid. It is not apparent if the Krishnan (2008) approach will provide robust estimates in the current market where data observations are extremely limited, or in the case of ten year BBB, non-existent.

Synergies is of the view that it is preferable to use an independent, transparent and reputable data source than to adopt the option suggested by IPART. Apart from the issues associated with being able to easily replicate and independently validate the calculations, it is questionable if the approach suggested by IPART's consultant will produce robust results in the current economic climate.

We are not of the view that Professor Schlogl's method is an appropriate solution to this problem. As outlined above, there may be some other method that could be applied but we have not considered this in detail here.

4. Use a longer term, 'post commencement of GFC' average until evidence emerges of liquidity returning to the corporate bond market

There is some evidence emerging that the global economy may now be entering the latter stages of the financial crisis. Commonwealth Government bond yields have increased from historical lows in late 2008/early 2009 (where they fell below 4%) to be now over 5.5%.

However, it is not yet evident the global capital markets have recovered from the crisis. In particular, there is no evidence to suggest that conditions in the corporate bond

[40] C. Krishnan, P. Ritchken, and J. Thomson, (2008), Predicting Credit Spreads, Department of Finance, Weatherhead School of Management, Case Western Reserve University, working paper.

market have improved to the point where a BBB borrower would be able to secure long-term funding (let alone for a lower cost) – indeed it is for this reason that Bloomberg no longer publishes longer term yields on BBB or A-rated bonds (although this problem existed prior to the crisis). It is therefore incorrect to assume that because the 'flight to quality' impact on Commonwealth Government bond yields has reversed, we are also likely to see any material reductions in the cost of debt.

Further, even if the global economy fully recovers, it is uncertain as to whether conditions in the capital markets will ever return to the conditions observed prior to the sub-prime crisis. In some jurisdictions additional regulatory controls have been imposed on the financial system which will necessarily alter the behaviour of lending institutions.

In our view, it is therefore possible that there has been some structural change in this market, with lenders reassessing their lending policies and the perceived risk of low investment grade credits who want to lock in funding for longer terms. While it is reasonable to expect that debt margins will fall in future, there is considerable uncertainty as to when and by how much. It could be some time before margins return to the levels observed prior to the global financial crisis.

Until such evidence emerges, one option is to estimate a longer term 'post commencement of GFC' average margin based on the data that is available. This average could be taken from say, 1 October 2008 given September was seen as a key milestone in the deepening of the crisis (this month saw the collapse of Lehman Brothers and Fannie Mae and Freddie Mac being placed in conservatorship).

This could include CBA Spectrum's BBB ten year yields, as well as the methodology previously applied by the AER and other regulators prior to the cessation of publication of the long term BBB and A bond yields. The main difficulty with the latter is that this will become less relevant going forward the further away in time we are from August 2009 (which was when the data ceased being published). For example, we note that BBB yields have spiked upwards since July 2009. The following chart shows the recent trend in the yields on the two BBB maturities that are still published by Bloomberg, being five and seven years.

Figure 1 Bloomberg estimated yields on 5 and 7 year BBB from 1 July 2009 to 16 October 2009

Data source: Bloomberg

As outlined above, there have always been issues with the reliability of this data given the eight and ten estimates were indicative and not based on data for actual bond issues for these maturities.

We consider that this is still sufficiently recent to be considered alongside other methods, however we would not propose placing significant reliance on such an estimate.

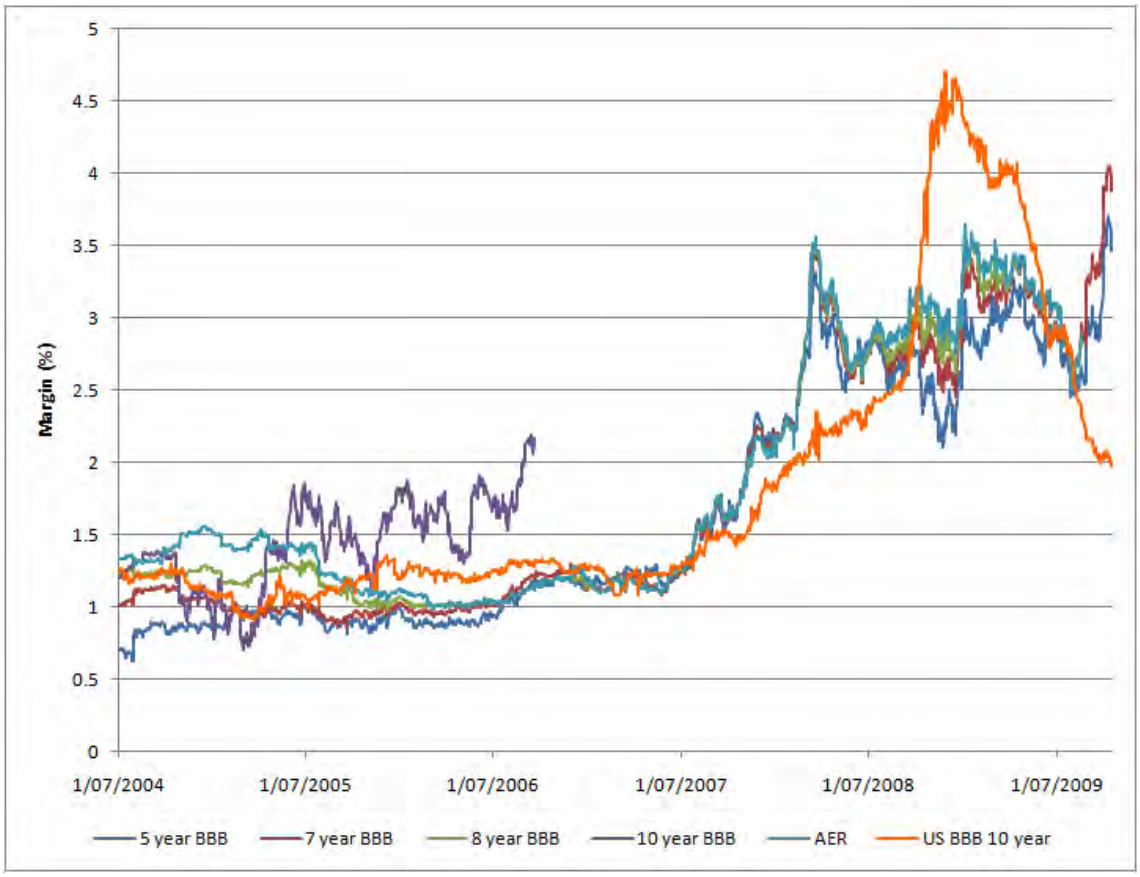
5. Examine cost of debt for Australian issuers in other markets (such as US)

Another alternative is to reference a market that is not constrained by the liquidity problems that are evident in the corporate bond market here (or at least not to the same extent), such as the US. The following chart shows the margin on the US ten year BBB rate (over ten year US Treasury bonds) and the margins on Australian BBB bonds of different maturities (over the ten year Commonwealth Government bond), including the 'AER' method (which is based on the eight year BBB interpolated using the yields on eight and ten year A-rated bonds). All data is sourced from Bloomberg and the yields are plotted from 1 July 2004.

It is also important to note that the US margins are not swapped back into Australian dollars. This is because the purpose of this analysis is to consider the relative movements in margins through time (relative to the relevant sovereign government bond yield which is the proxy for the risk-free rate). If the US margins were to be relied

upon to estimate the debt margin for an Australian corporate, they would need to be swapped back into Australian dollars.

Figure 2 Australian and US BBB bonds: margins to relevant risk-free rate



Data source: Bloomberg

This shows a significant divergence between US ten year BBB debt margins and Australian BBB debt margins from around September 2008, which as outlined above, marked the deepening of the crisis.

Prior to the deepening of the crisis, there was a strong relationship between US and Australian BBB debt margins. For example, the correlations between:

- the ten year US BBB margin and the five year Australian BBB margin was 0.94; and
- the ten year US BBB margin and seven year Australian BBB margin was 0.95.

The correlation between the Australian five year and seven year margins was 0.99.

The relationship between the US and Australia has now changed completely. The correlations have changed to -0.37 and -0.35 for the five and seven year margins with

the US BBB margin. The relationship between the Australian five and seven year margins has remained strong at 0.95.

It appears that US margins are no longer indicative of Australian margins and considerable caution must therefore be exercised when using them, even when they are used as a 'cross check' against a margin derived from Australian data.

Given there are clearly different drivers in the different markets (particularly since the global financial crisis), we do not consider it appropriate to use US data to proxy the yields on Australian corporate bonds issued in Australia. However, the reality is that given the market conditions that currently prevail, if a large Australian BBB-rated borrower wants to access funds for longer terms, it will consider accessing other markets, such as the US. The 'all-in' cost to that borrower would be based on the cost of debt in that relevant market, swapped back into Australian dollars.

There are two data sources that could be examined here. The first is Bloomberg's US ten year BBB bond yield. The second is to examine actual issues of Australian corporates into the US market. For example, in 2009 APA raised two tranches of funding via a US private placement. The cost of this funding (swapped to Australian dollars) was been 600 and 700 basis points relative to the swap curve. This cost will be relative to movements in swap spreads as well as the underlying cost of debt. For example, APA has estimated that the likely cost at the current time could be around 700 basis points.

6. Seek to obtain data from other forms of borrowing, such as bank debt

Rather than issue its own bonds, a BBB borrower might obtain funds directly from a bank. The difficulties with this are that the cost of the facility will be very specific to the borrower and data can be difficult to access. We have therefore not sought to investigate this any further.

Indicative costs

Of the options we consider feasible, the following table summarises the indicative costs of each option. The estimates are taken based on 20 day averages to 19 October 2009, with the exception of the longer term 'post commencement of GFC' average, which is taken from 1 October 2008 to 31 July 2009 (the end date is the end of the month prior to the cessation of publication of the Bloomberg eight year BBB, ten year A and eight Year A yields).

Table 7 Options for estimating the cost of debt: indicative debt margins

Method	Indicative debt margin
CBA Spectrum	458 basis points
Use longest published Bloomberg BBB bond yield (7 year) and extrapolate based on next available ten year rate (AAA)	438 basis points
Use longest published Bloomberg BBB bond yield (7 year) and extrapolate via linear interpolation, based on margin between Bloomberg BBB 5 and 7 year bond yields	437 basis points
Long term post GFC average. For Bloomberg, based on 8 year BBB plus difference between 8 and 10 year A from 1 Oct 2008 to 18 August 2009	Bloomberg: 316 basis points CBA Spectrum: 562 basis points Average = 440 basis points
Estimated cost of raising funds via a US private placement, swapped back to Australian dollars.	600 to 700 basis points

Source: Bloomberg

We note that all of these estimates are very close together, with the exception of the US data.

All of these methods have their advantages and disadvantages and it is not evident to us that one is clearly superior to the other. For this reason, we do not consider it appropriate to rely on a single method. The methods that we consider it appropriate to reference are:

- **CBA Spectrum**. It remains the sole provider of ten year BBB bond yields in Australia. As outlined above, the AER has now accepted that this is a valid alternative although is not proposing to solely rely on it. It reached this conclusion after testing CBA Spectrum's and Bloomberg's predicted yields against a sample of actual bonds.
- **Bloomberg seven year BBB, extrapolated based on AAA data**. While there are some concerns with assuming that the term structure inherent in the AAA yield curve can be applied to a BBB, noting that it is more likely to understate the term structure than overstate it, it is considered more likely that the long term AAA fair value yields are based on actual data from long-term bond issues and hence are at least reflective of actual market data.
- **Bloomberg seven year BBB, extrapolated based on the term structure of five year to seven year BBB data**. As there are concerns assuming that the term structure of the AAA yield curve can be applied to BBB, this method only uses BBB data. The term structure between five years and seven years is applied to the seven year data and extrapolated to ten years. This assumes the slope of the yield curve is constant.

As outlined above, the first two methods are the same methods that were used by the Authority in its Final Decision in relation to SWIN. We have already identified problems with the third method used by the Authority in that decision (which sought to adjust the AAA spread based on the ratio between seven and ten year A and AAA spreads). It is also observed that the estimate produced by our third method, which is to extrapolate the seven year BBB bond yield based on the difference between five and seven year BBB bond yields, is very close to the estimate produced by extrapolating the seven year BBB based on the AAA spread (the difference is only a basis point).

Based on the indicative margins estimated above, the resulting range based on these methods would be between 438 and 458 basis points. The average of the three methods is 445 basis points. Interestingly, this is very close to our long-term 'post commencement of GFC' average of 440 basis points. Taking an average of Bloomberg and CBA Spectrum is consistent with the advice of the Authority's own consultant, Frontier, who concluded:

> …we do not consider it appropriate to ignore the CBA Spectrum estimates entirely. The CBA Spectrum and AER/Bloomberg estimates are currently different from one another, but in our view the reasons for relying on the AER/Bloomberg approach are flimsy at best. We do not consider it appropriate to place 100% weight on the estimates constructed by the AER from Bloomberg data and to place zero weight on the estimates from CBA Spectrum.[41]

It is also consistent with the AER's recent decision in relation to the AMI review, although we note that they have subsequently applied CBA Spectrum only. The AER has indicated that it will continue to test the indicative yields produced by CBA Spectrum and Bloomberg (including an average of the two) against actual observed yields on shorter term bonds.

We have some fundamental problems with this approach and to the extent that the more 'reliable' estimate is seen to be varying between sample periods that are within months of each other suggests to us that there are issues with both methods. We therefore consider that deriving a range from both estimates is prudent.

We do not propose to set out these problems in detail here. However, the key point that can be drawn from this is that the AER is now accepting the use of CBA Spectrum to the point where it has solely relied upon it in recent decisions.

The US data can be used as a cross-check however we do not consider that they can be relied upon to estimate the cost of debt. It shows that in the current market

[41] Frontier Economics (2009), op.cit., p.45.

environment, the costs for a large Australian corporate issuing into the US market are higher than the estimates cited above.

We note that the Authority and other regulators will be examining other alternatives, including determining their own methodology to construct a BBB yield curve. If such an approach is to be applied, it is considered imperative to be able to demonstrate that:

- the resulting yields are better predictors of the actual cost of debt than either Bloomberg or CBA Spectrum;
- the method is transparent and able to be readily understood; and
- it can be readily replicated by participants using current market data.

As there are no ten year BBB corporate bonds on issue in the Australian market, the ten year BBB yield curve is non-observable. It therefore needs to be reasonably estimated. A reasonable approach is to use Australian data. We suggest using the average of three approaches. The three approaches are:

- CBA Spectrum;
- Bloomberg seven year BBB, extrapolated based on AAA data; and
- Bloomberg seven year BBB, extrapolated based on the term structure of five year to seven year BBB data.

As set out above, the resulting range based on these methods would be between 438 and 458 basis points. The average of the three methods is 445 basis points. This appears reasonable within the context of the recent decisions released by the AER (recognising that most of these decisions are in draft), where in all cases the debt margin applied was over 400 basis points. The notional credit rating for these businesses is BBB+. As we consider that GGP's notional rating should be set at BBB-, its cost of debt should be higher.

5.3 Debt raising costs

As outlined in our previous submission, there is limited publicly available data in relation to debt raising costs. However, some ad hoc evidence has emerged to suggest that these costs have materially increased following the global financial crisis.

APA Group has evidence from recent debt raisings to show that actual costs of raising debt are now materially higher than 12.5 basis points. This information is commercial in confidence and has been included in Confidential Appendix D.

This attachment includes information showing the actual costs that APA has incurred this year in relation to over $2 billion of existing facilities and re-financings. This evidence shows that debt raising costs have increased materially, particularly the costs of syndicated bank facilities. This is seen to reflect the significant tightening in the availability of credit and the increase cost of commitment facilities due to new BASLE requirements that have increased the cost of holding facility commitments. The increase in costs is therefore seen as a 'step change' in market terms and conditions and these new levels are expected to continue to be observed for the foreseeable future.

Based on the information provided, the estimate for debt raising costs is over 75 basis points per annum.

As outlined previously, APA owns a number of pipeline assets across Australia and has a total asset base of over $4.7 billion,[42] which is presumably significantly larger than the 'efficient benchmark firm'. APA therefore enjoys economies of scale benefits in accessing debt markets and raising debt in those markets. This has been recognised by the AER, who has applied a 'sliding scale' in determining the debt margin to apply to different businesses (that is, the more the amount of debt raised, the lower the margin applied). The actual debt raising costs incurred by GGP would therefore be higher than the costs incurred by the APA Group.

The information provided by APA shows that GGP's upper bound estimate of 30 basis points is likely to be significantly underestimating the costs of raising debt following the commencement of the global financial crisis. As indicated above, the costs are more likely to be at least 75 basis points per annum.

[42] APA Group (2009) Annual Report, http://2009annualreport.apa.com.au/balance-sheet/.

6 Inflation

6.1 Averaging approach

It is noted that the Authority has accepted the estimate of inflation submitted by Goldfields Gas Pipeline (GGP) but not the methodology. GGP had proposed an arithmetic average, whereas the Authority has applied a geometric average.

The Authority notes that the Australian Energy Regulator (AER) applied the latter approach in its Final Decision in relation to the New South Wales electricity distribution networks.[43] The discussion of the AER's reason for choosing this method has been limited. In its recent Draft Decision for the Queensland electricity distribution businesses, the AER indicated that it prefers a geometric average because:

> …it is consistent with the calculations in the PTRM, namely that forecast inflation has a compounding effect on revenues and prices.[44]

There is no general acceptance that geometric averaging is more accurate than arithmetic – the key issue is which method is more appropriate under the circumstances. An arithmetic average is considered more appropriate when the observations are independent of each other. We are of the view that when forecasting inflation, the expected CPI in one year is independent of the CPI in the previous year (or the next year). This issue has previously been considered and debated in the context of the market risk premium (and averaging historical market returns). Hathaway, for example, concluded that the geometric return is more appropriate for historical averaging, although the arithmetic average remains appropriate for future estimates as it provides an unbiased estimator of expected future outcomes.[45]

The fact that the AER's Post Tax Revenue Model assumes that inflation has a compounding effect is completely independent of the derivation of the estimate that is used to forecast inflation, which is a single number. If there was sufficient liquidity in the indexed bond market, it is most likely that we would be applying an estimate derived from indexed bond yields, rather than applying an average. We do not consider that the AER's reasoning is adequate justification for the application of a geometric average.

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44 Australian Energy Regulator (2009c), op.cit., p.282.

44 Australian Energy Regulator (2009c), op.cit., p.282.

45 N. Hathaway (2005), Australian Market Risk Premium, Capital Research Pty Ltd.

We are therefore of the view that an arithmetic average is the more appropriate method to apply when forecasting inflation based on RBA forecasts. However, we recognise that this methodological issue may have little impact on the value of the inflation parameter.

6.2 Recommencement of the Commonwealth Government's issuance program

Prior to the use of the method outlined above (that is, averaging expected future inflation over the next ten years), implied inflation was estimated based on the yields on the Commonwealth Government's inflation indexed bonds (using the Fisher equation). Given the lack of liquidity in the market, which was seen to be driven by the cessation of the Commonwealth Government's issuance program, this method was not seen as producing a reliable estimate.

In August 2009 it was announced that the Commonwealth Government would recommence the issuance of inflation-indexed bonds. At this stage, we consider it premature to assess the impact of this on market liquidity and the reliability of implied inflation estimates based on this data. We would therefore recommend that the averaging approach continues to be applied until evidence emerges that there is sufficient liquidity in this market.

If the Authority considered changing its estimation approach back to this method prior to the Final Decision, it is considered imperative that GGP should have the opportunity to respond.

7 WACC range

We understand that the Authority has previously selected the WACC from the upper bound of the range. We concur with this approach, as it gives regard to the inherent uncertainty underpinning WACC estimation, and the asymmetric consequences of error.

The Authority has now indicated that it intends to select an estimate from the mid-point of the range, however there is no discussion of why this is the case. At minimum, we consider that selecting a WACC from above the mid-point continues to be of fundamental importance given the asymmetric consequences of error. The reasons for this were set out in our previous submission in relation to the equity beta and are presented again here.

It is generally recognised that regulatory error has asymmetric consequences. The Productivity Commission stated: [46]

> - Over-compensation may sometimes result in inefficiencies in timing of new investment in essential infrastructure (with flow-ons to investment in related markets), and occasionally lead to inefficient investment to by-pass parts of the network. However, it will never preclude socially worthwhile investments from proceeding.
>
> - On the other hand, if the truncation of balancing upside profits is expected to be substantial, major investments of considerable benefit to the community could be forgone, again with flow-on effects for investment in related markets.
>
> In the Commission's view, the latter is likely to be a worse outcome.

In other words, the consequences of setting WACC too low, and discouraging efficient investment in essential infrastructure, are considered worse than setting it too high.

The estimation of WACC is inherently imprecise and hence the probability of specifying a WACC other than the 'true' value is high. For key parameters such as beta and the market risk premium, there is likely to be a range of reasonable estimates rather than a precise value (specific issues in estimating beta are considered in the following section). The Australian Competition Tribunal ('the Tribunal') recognised

[46] Productivity Commission (2001), Review of the National Access Regime, Report no. 17, AusInfo, Canberra, p.83.

the range of reasonable outcomes within which a Reference Tariff determination could fall:

> …there is no single correct figure involved in determining the values of the parameters to be applied in developing an applicable Reference Tariff. The application of the Reference Tariff Principles involves issues of judgement and degree. Different minds, acting reasonably, can be expected to make different choices within a range of possible choices which nonetheless remain consistent with the Reference Tariff Principles.[47]

In reality, there is a high probability that the true value of the WACC for a regulated entity may be higher or lower than the estimated value.

Typically, based on our best estimate for WACC we would expect the balance of consequences to be approximately equal (that is, if the consequences of too high a WACC are the same as the consequences of too low a WACC, and the probability of either consequence is the same, the expected value will be zero). However, if the consequences of an under- and over-estimate are not considered equal (in this case, the consequence of an under-estimate is worse than the consequences of an over-estimate), then if the probability of either outcome was equal, the expected value will be negative. We therefore need to adjust the probabilities in order to achieve an expected value of zero, which necessitates ensuring that the probability of the worse outcome is lower.

Given the asymmetric consequences of regulatory error, it is therefore important to lower the risk that the true value is higher than the estimated value as this is considered to have more severe social and economic implications. One way this can be achieved is by selecting a value towards the upper end of the range of reasonable values.

This conclusion does not consider the impact of asymmetric risk. Compensation for asymmetric risk is not reflected in the WACC given the Capital Asset Pricing Model (CAPM) assumes that returns are normally distributed. One of the key asymmetric risks for a regulated pipeline owner such as GGT is asset stranding risk.

In our view, asymmetric risk is best reflected via an adjustment to the cashflows. However, we note that the allowance for asymmetric risk which was proposed to the Authority has been rejected. We prepared a separate report on an asymmetric risk allowance which accompanied GGT's revised access arrangement proposal that set out why compensation for asymmetric risk is considered a legitimate claim. It also set out a methodology for estimating the cash flow allowance. We note that in the Draft

[47] Application by GasNet (Australia) Operations Pty Ltd [2003] ACompT 6, para 29.

Decision the Authority has not specifically responded to this report and its arguments and methodology in any detail.

In our view, if compensation for asymmetric risk is not provided in the cash flows, this provides further support for selecting a WACC close to (or at) the upper bound of the range. A failure to provide some reasonable compensation for asymmetric risk further dilutes incentives for the business to invest.

A Confidential: GGP's Contract Information

B Comparable companies

Firm	Equity Beta	Average Debt to Equity	t-statistic	R^2	Asset beta
Australian mining companies					
Alumina Limited. Alumina Limited is an Australian resource company that produces alumina. The Company owns about forty percent of Alcoa World Alumina and Chemicals through a joint venture with Alcoa.	1.91	0.37	8.255	0.54	1.44
BHP Billiton. BHP Billiton Limited is an international resources company. The Company's principal business lines are mineral exploration and production, including coal, iron ore, gold, titanium, ferroalloys, nickel and copper concentrate, as well as petroleum exploration, production, and refining.	1.14	0.25	6.19	0.4	0.91
BlueScope Steel. BlueScope Steel Limited is a steel company operating in Australia and New Zealand that serves the building and construction, manufacturing, automotive, and packaging industries worldwide. The Company manufactures and distributes hot and cold rolled coil, plate, tinplate, and coated products such as pre-painted steel and zinc/aluminium alloy-coated steel.	1.57	0.23	4.55	0.26	1.27
Fortescue Metals. Fortescue Metals Group Limited is involved in the exploration of iron ore through its East Pilbara Iron Ore Project in Western Australia.	2.67	1.6	3.95	0.21	1.02
Independence Group. Independence Group NL is a gold and nickel mining and exploration company. The Company's exploration projects are located in Western Australia, South Australia, and the Northern Territory.	2.04	0.03	4.39	0.25	1.99
Kingsgate. Kingsgate Consolidated Limited is a gold mining and exploration company with operations focused in Thailand at the Chatree gold project. The Company also explores for silver and other metals.	1.18	0.04	3.09	0.14	1.14
Kagara Ltd. Kagara Limited specialises in the mining and extraction of zinc. The Company's exploration projects are located in Queensland and Western Australia and include Walsh River, Admiral Bay, Balcooma, Muldiva and Mount Garnet.	4.18	0.2	6.35	0.41	3.48
Mincor. Mincor Resources NL is a nickel mining and exploration company with operations in the Kambalda Nickel District in Western Australia. Through a joint venture, the Company operates the Miitel and Wannaway nickel mines in Kambalda. The Company also has operations in projects located in Guinea, Tanzania and Fiji.	3.02	0.02	7.23	0.47	2.97
Mt Gibson. Mount Gibson Iron Limited is an iron ore exploration and production company. The Company holds mining leases covering hematite and magnetite deposits at Mount Gibson in Western Australia.	3.32	0.16	5.15	0.31	2.86
Minara. Minara Resources Limited and its subsidiaries are principally involved in the exploration, development and mining of nickel/cobalt metal from its Murrin Murrin Joint Venture operations in Western Australia.	2.24	0.04	4.95	0.3	2.15
Newcrest. Newcrest Mining Limited is a gold mining, exploration and production company. The Company's exploration projects include Telfer and Boddington which are located in Western Australia. The Company also is developing and exploring at the Cadia Hill and Ridgeway projects in New South Wales and the Gosowong project in Indonesia.	0.75	0.35	2.32	0.08	0.56

Firm	Equity Beta	Average Debt to Equity	t-statistic	R^2	Asset beta
OM. OM Holdings Limited is the holding company of OM Holdings Group, which processes and sells specialized metal materials in Australia. The Group's products include ferroboron, boric acid, magnesium sulphate and ferroalloys. The Group also sells manganese, chrome and other minerals to ferroalloy industries in China.	1.79	0.08	2.51	0.1	1.66
Onesteel. OneSteel Limited manufactures steel long products and distributes metals in Australia. The Company produces structural, rail, rod, bar, wire, pipe and tube products along with distributing sheet and coil, piping systems, plate and aluminium products. The Company's products are utilized by the construction, mining, rail and other manufacturing industries.	1.75	0.3	6.09	0.39	1.35
Panoramic. Panoramic Resources, Ltd. is a mining company that explores for and mines copper nickel, and cobalt in the Kimberley region of Western Australia.	2.58	0.16	6.11	0.39	2.22
Platinum. Platinum Australia Limited owns and operates platinum mines in Australia and South Africa.	2.55	0.37	4.42	0.25	1.86
Rio Tinto. Rio Tinto Limited is an international mining company. The Company has interests in mining for aluminium, borax, coal, copper, gold, iron ore, lead, silver, tin, uranium, zinc, titanium dioxide feedstock, diamonds, talc and zircon. Rio Tinto's various mining operations are located in Australia, New Zealand, South Africa, the United States, South America, Europe and Indonesia.	1.51	0.36	5.05	0.3	1.11
Straits Resources. Straits Resources Limited is involved in exploration, production, and sale of copper, coal and gold. The Company primarily produces copper from its Girilambone Mine and explores for coal through its exploration of the Sebuku project in Indonesia.	2.77	0.18	6.48	0.42	2.34
Western Areas. Western Areas NL is an exploration company that is involved in the development of the Fox Nickel mine and the exploration of nickel sulphides, platinum group metals and gold.	2.01	0.84	4.57	0.27	1.09
Gas transmission and distribution					
APA Group. APA Group has interests in a portfolio of high-pressure gas transmission pipelines in Australia which transport natural gas.	0.76	1.46	4.14	0.23	0.31
Envestra Limited. Envestra Limited operates natural gas distribution networks and transmission pipelines in South Australia, Queensland and the Northern Territory. The Company's networks distribute gas to households and businesses in Adelaide, Brisbane (north of Brisbane River), Alice Springs and various regional centres in South Australia and Queensland.	0.89	3.46	3.4	0.17	0.2
Atmos Energy Corp. Atmos Energy Corporation distributes natural gas to utility customers in several states. The Company's non-utility operations span various states and provide natural gas marketing and procurement services to large customers. Atmos Energy also manages company-owned natural gas storage and pipeline assets, including an intrastate natural gas pipeline in Texas.	0.51	0.63	4.83	0.29	0.31
Equitable Resources, Inc. Equitable Resources, Inc. is an integrated energy company with emphasis on Appalachian area natural-gas supply, transmission and distribution. The Company, through its subsidiaries, offer natural gas products to wholesale and retail customers.	0.83	0.43	4.38	0.25	0.58
Southwest Gas Corp. Southwest Gas Corporation purchases, transports, and distributes natural gas to residential,	0.73	0.7	5.13	0.31	0.43

Firm	Equity Beta	Average Debt to Equity	t-statistic	R^2	Asset beta
commercial, and industrial customers in portions of Arizona, Nevada, and California. The Company also provides construction services to utility companies, including trenching and installation, replacement, and maintenance services for energy distribution systems.					
Chesapeake Utilities. Chesapeake Utilities Corporation is a utility company that provides natural gas transmission and distribution, propane distribution, and information technology services. The Company distributes natural gas to residential, commercial, and industrial customers in Delaware, Maryland, and Florida. Chesapeake Utilities' propane is distributed to customers in Delaware, Maryland, and Virginia.	0.43	0.47	2.93	0.13	0.29
Pacific Northern Gas. Pacific Northern Gas Ltd. owns and operates natural gas transmission and distribution systems. The Company's western transmission line provides service to communities and industrial facilities. Pacific's subsidiaries provide gas distribution service.	0.43	0.47	2.93	0.13	0.29
Northwest Natural Gas Company. Northwest Natural Gas Company distributes natural gas to customers in western Oregon, as well as portions of Washington. The Company services residential, commercial, and industrial customers. Northwest Natural supplies many of its non-core customers through gas transportation service, delivering gas purchased by these customers directly from suppliers.	0.24	0.5	1.78	0.05	0.16
The Laclede Group. The Laclede Group, Inc. is the parent company for Laclede Gas Company, a public utility involved in the retail distribution of natural gas. The Company serves an area in eastern Missouri, including the city of St. Louis, St. Louis County, and parts of several other counties. Laclede also operates underground natural gas storage fields and transports and stores liquid propane.	0.19	0.57	0.12	0.0003	0.01

C Tax Statistics Analysis

C.1 Background

The valuation of gamma has been the subject of ongoing debate in regulatory reviews in recent years. While established precedent has been to apply a value of 0.5, evidence has emerged from a number of reputable Australian studies to show that the value of gamma has fallen considerably (and may in fact be zero).

The AER's Statement of Regulatory Intent (SoRI) was therefore considered contentious by many market participants and stakeholders, given it proposed an increase in the value of gamma to 0.65. This is the first time a gamma above 0.5 has ever been applied by an Australian regulator to an electricity network business (or any other regulated business). In addition, the justification for a higher gamma was founded largely on the results of a piece of analysis which relies on a methodology considered by many experts to be sub-optimal. In our view, the AER's proposal to apply a gamma of 0.65 does not provide NSPs with the opportunity to recover the efficient costs of providing their regulated services in accordance with section 7A of the National Electricity Law.

There are a number of fundamental issues with the approach that has been taken by the AER in arriving at its value, including its dismissal of a number of key market-based studies that show that the value of gamma is less than 0.5 (and indeed may be close to zero). These issues have been addressed in detail by the Joint Industry Associations (JIA) and their consultants in their submission prepared in response to the proposed SoRI. We therefore do not propose to revisit these arguments in detail here. That analysis showed that there is not only persuasive evidence that has been discarded by the AER, but some of the key assumptions and evidence underpinning its own conclusions are flawed.

C.2 Overview of Gamma

Corporate tax is effectively a prepayment of personal tax withheld at a company level. Gamma (γ) is that proportion of the corporate tax which can be claimed as a tax credit against personal tax, that is, it is the value of personal tax credits distributed.

Gamma is the product of two inputs which must be estimated being:

- the proportion of tax paid that has been distributed to shareholders as franking credits (the distribution rate); and

- the value the marginal investor places on $1 of franking credits, referred to as the value of franking credits (theta).

C.2.1 Distribution Rate

Based on statistics supplied by the Australian Taxation Office, Hathaway and Officer estimate that approximately 71% of franking credits are distributed to shareholders.[48] However, only 32% of the distributed franking credits were redeemed.[49] This suggests that a significant number of shareholders chose either not to utilise, or were unable to utilise, their franking credits.

The AER has assumed a distribution rate of 100%. In arriving at its conclusions the AER has relied on a further paper by Handley, "Further Comments on the Valuation of Imputation Credits"[50]. We have a number of fundamental problems with this report, including issues of fact. For example, in relation to the distribution rate of 100%, Handley assumes that:

- Officer's (1994) framework assumes a perpetuity and hence a 100% distribution rate. It is true that the framework is a perpetuity model however we dispute that this implies a 100% distribution rate – instead it implies a constant payout rate (that we observe is around 70%); and
- the assumption of 100% is also consistent with the Miller and Modigliani framework. While Miller and Modigliani allowed the payout ratio to vary to illustrate the irrelevance of dividends this is not an explicit assumption of their model.

As there has not been sufficient time since the release of the SoRI to explore these issues in detail we have not sought to do so here. However, in our view there are potentially significant issues with the evidence the AER has relied upon in coming up with this assumption.

C.2.2 Theta

While the distribution rate can be generally observed from taxation statistics, the value of franking credits cannot be directly observed. The value of franking credits is

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48 Hathaway, N. & Officer, R. (2004), The Value of Imputation Tax Credits: Update 2004, Unpublished Working Paper, Capital Research Pty Ltd.

49 Australian Taxation Office (2005), Taxation Statistics 2002-03, Australian Government.

50 Handley, J. (2009), Further Comments on the Valuation of Imputation Credits, Report Prepared by the Australian Energy Regulator, 15 April.

determined at the level of the investor and is influenced by the investor's tax circumstances. The value of gamma is between zero (no value from franking credits) and one (full value of franking credits).

Imputation credits are only available in respect of company tax paid on income subject to Australian taxation. For gamma to equal one all income must be domestically taxable. What is clear is that different shareholders value franking credits differently, as their tax status determines whether their credits are able to be redeemed. While some regulators have sought to exclude the impact of foreign investors when evaluating gamma (which in turn assumes that the domestic market is fully segmented from world markets), the AER assumed that the definition of the market is a domestic market with foreign investors recognised.[51]

The AER has employed two key approaches to estimate the value of theta, being an analysis of:

- market prices – this has been used to determine the lower bound; and
- tax statistics – this has been used to determine the upper bound.

The AER has relied on a study by Beggs and Skeels (2006) in coming up with its lower bound of 0.57. Its upper bound of 0.74 is based on an analysis of tax statistics by Handley and Mahesaran (2008).

> In arriving at its final estimate the AER acknowledges the considerable complexities associated with valuing gamma that have been recognised by market practitioners (and have also been the source of contention in previous regulatory debates). However, it is now of the view that…it is indeed possible to arrive at a reasonable empirical estimate of the value of imputation credits taking into account all the available evidence.[52]

However, we also observe that Handley's most recent report concludes that a reasonable estimate for gamma is within the range of "0.3 to 0.7".[53] This clearly does not support the notion that a definitive value for gamma can now be determined.

We believe that analysis involving market prices is the only method that can be used to estimate the *value* of imputation credits. Tax statistics analysis cannot determine the

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[51] Australian Energy Regulator (2009), Final Decision: Electricity Transmission and Distribution Network Service Providers - Review of the Weighted Average Cost of Capital (WACC) Parameters, May, p XIX.

[52] ibid., p.410.

[53] Handley, J. (2009), op.cit., p.41.

value of imputation credits. However, the AER has used this methodology to determine the upper bound.

Synergies has therefore undertaken its own analysis of taxation statistics and has arrived at a very different outcome to Handley and Maheswaren's 2008 study. More importantly, as outlined above, the results do not provide a value for gamma and will still overstate the observed upper bound derived from ATO publicly available tax statistics when properly interpreted. The results of this analysis are presented below.

C.3 Tax statistics analysis

As noted upfront, an examination of taxation statistics will not ascribe a value for gamma. Taxation statistics measure the quantum of corporate taxation, the amount of credits distributed and the amount of credits claimed. The amount of credits claimed is not the value of those credits. It does not take into consideration the risk that shareholders bear in earning the dividends and credits. Therefore it merely establishes a hypothetical upper bound for theta (as the value must then be $1 per $1 of credits) which is higher than the 'true' upper bound.

The table below presents data available from the Australian Taxation Office. It illustrates corporate tax paid, dividend information, and imputation credits claimed. The data is for financial years from 2003 to 2007[54], a period reflective of the current taxation regime as it affects dividends. The corporate taxation rate has also been constant over this period.

[54] Note that 2008 data was not available at the time of this report. All data was sourced from the ATO web site and table references can be supplied. For example corporate tax was obtained from http://www.ato.gov.au/corporate/content.asp?doc=/Content/00177078.htm, company tax table 3.

Table C.8 Australian Taxation Statistics: 2003 to 2007

Year	2007	2006	2005	2004	2003
	$ mil	$ mil	$ mil	$ mil	$ mil
Company					
Net Tax Payable	58,189	47,551	40,455	35,375	31,379
Dividends					
Franked	79,224	71,406	62,209	51,630	56,453
Unfranked	9,918	7,655	7,184	6,235	18,963
Total	89,142	79,061	69,393	57,865	75,416
Distributed Credits	33,953	30,603	26,661	22,127	24,194
Personal					
Dividends	18,936	15,331	13,449	11,512	9,923
Credits	10,526	8,357	7,305	6,199	5,246
Funds					
Dividends	8,766	7,029	6,299	4,044	4,127
Credits	3,474	2,667	2,471	1,559	1,149
Total Claimed	14,000	11,024	9,776	7,758	6,395
Proportion Claimed	24%	23%	24%	22%	20%
Possible Credits	58,189	47,551	40,455	35,375	31,379
Distributed Credits	33,953	30,603	26,661	22,127	24,194
Proportion Distributed (1)	58%	64%	66%	63%	77%
Reclaimed Credits	14,000	11,024	9,776	7,758	6,395
Proportion Claimed	24%	23%	24%	22%	20%

Note: (1) the average proportion distributed between 2003 and 2007 was 66%

Source: Australian Taxation Office Statistics

The data is similar to that presented by Handley and Maheswaran[55] but extends their statistical analysis and provides evidence that questions their conclusion. We believe that when properly interpreted, the 'upper bound' that the AER has sought to rely on based on tax statistics is materially lower.

[55] J. Handley & K. Maheswaran (2008), op.cit. Note that the personal imputation credits in 2004 were $6,199 million which is the same as the figure reported in their study. 2004 is the latest year they examined.

The net tax payable is the corporate tax that has been paid in each year. It is the dollar amount of the maximum credits that could be claimed by taxpayers if sufficient dividends were paid each year and all shareholders had the ability to claim the imputation credits. The corporate tax paid in 2007 was $58,189 million.

Dividends paid in 2007 were $89,142 million. Of these dividends some were franked and some unfranked. The franked dividends which had attached imputation credits were $79,224 million in 2007. The available imputation credits in 2007 were $33,953 million.

In 2007, of the total credits created, being the total amount of corporate tax paid of $58,189 million, only 58% was actually distributed and the balance was retained within the companies. Between 2003 and 2007, the proportion distributed varied between 58% and 77% with the average proportion distributed was 66%. This is broadly consistent with the findings of Hathaway and Officer (which was a distribution rate of around 71%). Obviously the payout was not 100% as asserted by Handley. The payout was consistent over time supporting the notion that credits are lost in perpetuity. The estimate of the payout of 66% is close to 71% and materially different from 100%.

It is important to note that companies consistently only distribute a proportion of available credits. On average 34% of credits are retained by the company. Given the consistent nature of the payout, it appears that the credits retained are indefinite. The present value of the credits retained indefinitely must be zero. In other words, 34% of available credits have no value to shareholders.

Not all of the possible credits are distributed. In addition, not all dividends distributed are claimed as credits as only Australian residents for taxation purposes can claim the credits. As shown in the table above, the credits claimed by personal taxpayers in 2007 were $10,526 million. The credits claimed by funds were $3,474 million.

In 2007, of the corporate tax paid, 58% was distributed and 24% was claimed as credits. For the period 2003 to 2007, the maximum proportion of corporate tax that could be considered to be a prepayment of personal tax is 24%. That proportion varied marginally between 20% and 24% with an average of 23%.

Therefore, based on actual payout practices, the maximum possible amount that gamma could be on average is 23%. Even if the AER's assumed payout ratio of 100% is applied (although this is not accepted), the maximum possible upper amount for gamma would be 35%.

These results are materially different to the results arrived at by Handley and Maheswaran. We have not been able to clearly reconcile the difference. Handley's data

source is not suitably referenced, nor is it transparent or verifiable. Synergies is therefore not able to confirm the validity of Handley's data.

However, our interpretation of what has occurred is that they have only examined the amount of credits distributed to shareholders. Our analysis looks at the amount of credits that have been created, distributed, and redeemed by taxpayers. In our view, this difference is of fundamental importance as not all credits created are distributed and not all distributed credits are redeemed by shareholders.

As previously emphasised, to determine the value of gamma, an examination of market data is required. Value can only be measured in this case in terms of price reaction, i.e. how shareholders price or value imputation credits. Taxation statistics only provide the maximum possible amount of imputation credits that have been claimed by taxpayers.

C.4 Conclusion

Corporate tax is effectively a prepayment of personal tax withheld at a company level. Gamma is that proportion of the corporate tax which can be claimed as a tax credit against personal tax, that is, it is the value of personal tax credits.

This note measured the maximum possible amount that could be ascribed to gamma (but not the value of gamma) by examining taxation statistics. It was shown that not all credits created are distributed and of those distributed, not all are claimed by the individual shareholders. Based on the actual payout ratios observed from the statistics, the maximum possible amount of credits claimed is 23%. If this is adjusted to reflect the AER's assumed payout ratio, the maximum is 35%.

The taxation statistics do not reflect the risk that is borne by shareholders in holding shares to derive imputation credits. An examination of market data is required to correctly value gamma.

The AER has used the tax statistics analysis in setting the upper bound of its range for gamma (0.74) and in so doing has arrived at a point estimate for gamma of 0.65. In setting this upper bound the AER has solely relied on a study by Handley and Maheswaran. While the data has not been published to enable the results of this study to be replicated, our own analysis arrived at a significantly lower figure.

In our view, if the AER's methodology is properly interpreted and applied, the value for gamma must be somewhere between:

- 0 and 0.23 (if actual observed payout ratios are adopted); or

- 0 and 0.35 (if a 100% payout ratio is adopted).

We note that the JIA's recommended estimate of 0.2 lies within this range. While we have not sought to re-examine evidence from market prices in this report, in our view a range of between 0 and 0.2 is a more reasonable and plausible value for gamma.

D Confidential: APA Group's Debt Raising Costs