Economic Regulation Authority

Western Australia

Amended Draft Decision on the Proposed Access Arrangement for the Goldfields Gas Pipeline

Submitted by

GOLDFIELDS GAS TRANSMISSION PTY LTD

ECONOMIC REGULATION AUTHORITY

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DECISION

1. On 15 December 1999, Goldfields Transmission Pty Ltd ("**GGT**") submitted a proposed Access Arrangement for the Goldfields Gas Pipeline ("**GGP**") to the Western Australian Independent Gas Pipelines Access Regulator ("**Regulator**") for approval under the *National Third Party Access Code for Natural Gas Pipeline Systems* ("**Code**").

2. On 10 April 2001 the Regulator issued a Draft Decision on the proposed Access Arrangement for the Goldfields Gas Pipeline. The Draft Decision of the Regulator was to not approve the proposed Access Arrangement and the Regulator indicated 49 amendments to the proposed Access Arrangement that would have to be made before the proposed Access Arrangement would be approved.

3. In August 2002, the Full Court of the Supreme Court of Western Australia handed down its decision in proceedings brought in respect of the Regulator's Draft Decision on the proposed Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline ("**Epic Decision**").[1] The Epic Decision dealt with matters of construction of the Code, particularly in respect of determination of the Initial Capital Base for a pipeline.

4. In light of the Epic Decision, on 6 November 2002 the Regulator issued a notice advising of a decision to amend the Draft Decision on the proposed Access Arrangement for the Goldfields Gas Pipeline rather than proceeding to a Final Decision.[2]

5. On 1 January 2004 the function of approval of the proposed Access Arrangement moved to the Economic Regulation Authority ("**Authority**"). The Authority is the "Relevant Regulator", under the *Gas Pipelines Access Law*, for approval of the proposed Access Arrangement for the GGP.

6. The Authority has amended the Draft Decision issued by the Regulator on 10 April 2001 and accordingly issues this Amended Draft Decision.

7. The Authority has considered the proposed Access Arrangement under the principles set out in the Code.

8. The Authority has considered and weighed the factors in section 2.24 of the Code as fundamental elements in making the overall decision whether to approve the proposed Access Arrangement, recognising that at some points the Code expresses the section 2.24 factors in specific provisions dealing with particular aspects of an Access Arrangement.

9. The Authority proposes to not approve the proposed Access Arrangement on the basis that it does not satisfy the principles in sections 3.1 to 3.20 of the Code. The detailed

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[1] *Re Dr Ken Michael AM; Ex Parte Epic Energy (WA) Nominees Pty Ltd & Anor* (2002) 25 WAR 511.

[2] Notice – Proposed Access Arrangement for the Goldfields Gas Pipeline, Office of Gas Access Regulation, 6 November 2002.

reasons for this decision are set out in this document. Amendments required to be made to the proposed Access Arrangement in order for the Authority to approve it are listed after the reasons.

REASONS

Introduction

10. The GGP was officially opened on 4 October 1996. It comprises a gas transmission system consisting of a main pipeline which begins at Yarraloola in juxtaposition to the Dampier to Bunbury Natural Gas Pipeline ("**DBNGP**") (but not connected to the DBNGP) and transports gas through 1,378 km of pipeline to Kalgoorlie. The construction of the GGP followed a call for "expressions of interest" by the Western Australian Government in March 1993. In mid 1993 the Government awarded the right to build the pipeline to a joint venture of Wesminco Oil Pty Ltd (Western Mining Corporation Holdings Ltd), Normandy Pipelines Pty Ltd (Normandy Poseidon Ltd) and BHP Minerals Pty Ltd.

11. The Goldfields Gas Pipeline Agreement ("**State Agreement**") was signed between the government and these joint venturers in March 1994.

12. The Code came into effect in Western Australia on 15 January 1999 when the *Gas Pipelines Access (Western Australia) Act 1998* was assented to. However, section 97 of this Act provided for the continuation of existing access arrangements for the GGP – under the State Agreement – to continue until 1 January 2000 by deeming the existing access arrangements to be an approved Access Arrangement under the Code until that date.

13. On 15 December 1999 GGT submitted the proposed Access Arrangement for the GGP to the Regulator for approval under the Code. The Regulator issued a Draft Decision on the proposed Access Arrangement on 10 April 2001. The Draft Decision was to not approve the proposed Access Arrangement.

14. In August 2002, the Full Court of the Supreme Court of Western Australia handed down the Epic Decision. The Epic Decision dealt with matters of construction of the Code, particularly in respect of determination of Reference Tariffs.

15. In light of the Epic Decision, on 6 November 2002 the Regulator issued a notice advising of a decision to amend the Draft Decision on the proposed Access Arrangement for the Goldfields Gas Pipeline rather than proceeding to a Final Decision.[3]

16. In this notice, the Regulator outlined the procedure he intended to follow in amending the Draft Decision, addressing a contention of GGT that the State Agreement (in particular clause 21(3)) has the effect of limiting the application of the Code to the GGP in circumstances where application of the Code materially adversely affects the

[3] Notice – Proposed Access Arrangement for the Goldfields Gas Pipeline, Office of Gas Access Regulation, 6 November 2002.

legitimate business interests of the owners of the GGP. The first stage of the procedure outlined in the Notice involved the Regulator applying the Code to the Proposed Access Arrangement without consideration of whether clause 21(3) of the State Agreement affected the application of the Code to the GGP and issuing a "Part 1" of an amended Draft Decision. Following the issue of this Part One of an amended Draft Decision, the Regulator proposed to invite the current owners of the GGP to demonstrate, by way of a written submission, whether the application of the Code would materially adversely affect their legitimate business interests within the meaning of clause 21(3) of the State Agreement. The Regulator proposed to then issue a "Part 2" of the amended Draft Decision setting out his assessment of the extent to which the Code applied in light of the submission by the owners of the GGP.

17. On 10 June 2003, WMC Resources Ltd obtained an Order Nisi requiring the Regulator and the State of Western Australia to show cause before the Supreme Court of Western Australia why a Writ of Prohibition should not be issued against the Regulator preventing him from considering or determining whether, under clause 21(3) of the State Agreement, the Code shall not have effect in relation to the GGP.

18. The matter was heard by the Supreme Court on 6 and 7 October 2003 and the Court issued its Reasons for Decision on 2 December 2003 ("**WMC Decision**").[4]

19. The Court held that the State Agreement is a contract and as such, not having statutory force, it is binding on the parties to the contract and not on others. In relation to clauses 21(2) and 21(3), the Court held that:

> … it is clear from the nature of the subject matter of cl 21(2) and (3) that the parties cannot have intended these two subclauses to have binding contractual force and effect. Further, whatever the intention of the parties, cl 21(2) and (3) cannot be enforced by the Court as binding contractual provisions. They can only be seen as expressions of comfort as between the parties to the contract as to what they each then expected or hoped would be the course of future events.[5]

20. The Court also indicated that:

> Whatever the legal force and effect of clause 21(3) as between the parties to the State Agreement, [it was] not able to read its provisions as conferring, or purporting to confer, any role or function or jurisdiction on the Regulator.[6]

21. Accordingly, on 18 March 2004 the Court made a declaration in the following terms:

> On the proper construction of the State Agreement ratified by the *Goldfields Gas Pipeline Agreement Act 1994* and on the proper construction of that Act, section 3 of the *Government Agreements Act 1979* and the *Gas Pipelines Access (Western Australia) Act 1998*, the Regulator is required to perform his functions under the Code without regard to clause 21(3) of the State Agreement.

22. As stated earlier, the function of approval of the proposed Access Arrangement was transferred to the Authority on 1 January 2004. Pursuant to the *Economic Regulation Authority Act 2003*, any decision made, or to be made, by the former Regulator is treated as having been made, or to be made, by the Authority.

[4] *Re Michael; Ex parte WMC Resources Ltd* (2003) 27 WAR 574.

[5] WMC Decision, ibid, at p 586.

[6] WMC Decision, ibid, at p 589.

23. On 6 April 2004 and subsequent to the WMC Decision of the Supreme Court, the Authority issued a notice amending the process it intended to follow in progressing assessment of the proposed Access Arrangement. The amended process involves three stages.

Stage One

- Application of the Code without consideration of whether subclause 21(3) of the State Agreement affects the applicability of the Code, but with consideration of the extent to which other matters arising under the State Agreement are relevant to the Authority's assessment of the Code.
- Invitation by the Authority to interested parties to prepare and provide written submissions that have regard to the reasons in the Epic Decision and any effect on matters identified in the Draft Decision as being the reasons for requiring amendments to the Proposed Access Arrangement.

Stage Two

- Release by the Authority of an Amended Draft Decision and invitation of submissions on the Amended Draft Decision from interested parties within a time that will be specified pursuant to section 2.14(b) of the Code.

Stage Three

- Consideration of submissions on the Amended Draft Decision and issue of a Final Decision.

24. With the issue of this Amended Draft Decision, the Authority has completed Stages One and Two of this process.

Access Arrangement Documents

25. GGT submitted its proposed Access Arrangement on 15 December 1999. Documentation submitted comprised:

- Access Arrangement, including General Terms and Conditions as Appendix 3 and Pipeline Maps as Attachment 1; and
- Access Arrangement Information.

26. Copies of these documents are available from the Authority or may be downloaded from the Authority's web site (www.era.wa.gov.au).

27. As part of this assessment, the Authority has considered the issues raised, and views expressed, in submissions made on the proposed Access Arrangement by interested

parties, submissions made on the April 2001 Draft Decision, and submissions made subsequent to the Notice issued on 6 November 2002.[7]

Requirements of the Code

28. Section 2.24 of the Code provides that:

> 2.24 The Relevant Regulator may approve a proposed Access Arrangement only if it is satisfied the proposed Access Arrangement contains the elements and satisfies the principles set out in sections 3.1 to 3.20. The Relevant Regulator must not refuse to approve a proposed Access Arrangement solely for the reason that the proposed Access Arrangement does not address a matter that sections 3.1 to 3.20 do not require an Access Arrangement to address. In assessing a proposed Access Arrangement, the Relevant Regulator must take the following into account:
>
> (a) the Service Provider's legitimate business interests and investment in the Covered Pipeline;
>
> (b) firm and binding contractual obligations of the Service Provider or other persons (or both) already using the Covered Pipeline;
>
> (c) the operational and technical requirements necessary for the safe and reliable operation of the Covered Pipeline;
>
> (d) the economically efficient operation of the Covered Pipeline;
>
> (e) the public interest, including the public interest in having competition in markets (whether or not in Australia);
>
> (f) the interests of Users and Prospective Users;
>
> (g) any other matters that the Relevant Regulator considers are relevant.

29. The "elements" of a proposed Access Arrangement, referred to in section 2.24 of the Code comprise:

- Services Policy (sections 3.1 and 3.2 of the Code);
- Reference Tariff and Reference Tariff Policy (sections 3.3 to 3.5 of the Code);
- Terms and Conditions (section 3.6 of the Code);
- Capacity Management Policy (sections 3.7 and 3.8 of the Code);
- Trading Policy (sections 3.9 to 3.11 of the Code);
- Queuing Policy (sections 3.12 to 3.15 of the Code);
- Extensions/Expansions Policy (section 3.16 of the Code); and
- Review Date (sections 3.17 to 3.20 of the Code).

[7] The *Economic Regulation Authority Act 2003* (WA) conferred on the Authority the functions and powers previously conferred on the Regulator under the *Gas Pipelines Access (Western Australia) Act 1998*. For the purposes of this Amended Draft Decision, all submissions previously made to the Regulator are taken as having been made to the Authority. Further, all references to the Regulator in the proposed Access Arrangement and in submissions are taken to be a reference to the Authority.

30. An Access Arrangement may deal with a number of matters beside those dealt with in sections 3.1 to 3.20, but an Access Arrangement must contain at least the elements dealt with in sections 3.1 to 3.20 and satisfy the principles set out in those sections.

31. In applying the Code to consideration of GGT's proposed Access Arrangement, the Authority has taken into account the judicial guidance contained in the Epic Decision.

32. The remainder of these reasons set out an examination of the elements of the proposed Access Arrangement.

33. As a preliminary issue, the Authority has given consideration to a matter raised by GGT in relation to the operation of an Access Arrangement.

34. In correspondence with the Authority, GGT has expressed concern that the operation of the Access Arrangement should not affect existing contractual rights between the owners of the GGP and third parties with respect to the "Initial Committed Capacity"[8] in the pipeline. Section 2.25 of the Code provides that the Regulator must not approve an Access Arrangement any provision of which would, if applied, deprive any person of a contractual right in existence prior to the date the proposed Access Arrangement was submitted (or required to be submitted). For the avoidance of any doubt, the Authority requires an amendment be made to the definition of "Spare Capacity" in the proposed Access Arrangement to the effect that Spare Capacity will only include the Initial Committed Capacity to the extent that it does not deprive any person of an existing contractual right.

Services Policy

35. Section 3.1 of the Code requires that an Access Arrangement include a policy on the Service or Services to be offered (a Services Policy). Section 3.2 of the Code requires that the Services Policy comply with the following principles.

> 3.2 (a) The Access Arrangement must include a description of one or more Services that the Service Provider will make available to Users or Prospective Users, including:
>
> (i) one or more Services that are likely to be sought by a significant part of the market; and
>
> (ii) any Service or Services which in the Relevant Regulator's opinion should be included in the Services Policy.
>
> (b) To the extent practicable and reasonable, a User or Prospective User must be able to obtain a Service which includes only those elements that the User or Prospective User wishes to be included in the Service.
>
> (c) To the extent practicable and reasonable, a Service Provider must provide a separate Tariff for an element of a Service if this is requested by a User or Prospective User.

36. The Services Policy of an Access Arrangement includes descriptions of a set of Services that the Service Provider will make available. The Service Provider is not

[8] Initial Committed Capacity is defined under clause 8 of the State Agreement and includes capacity reserved by each of the original joint venturers in the GGP and capacity reserved by foundation third-party Users of the GGP under clause 8(2)(b) of the State Agreement.

obliged to provide a Service unless it is one of the Services specified in the Access Arrangement (or an element of such a Service).

37. A Services Policy is provided in clause 4 of the proposed Access Arrangement. The Services Policy commits GGT to making available a Reference Service to a Prospective User and negotiating in good faith, subject to operational availability, for the provision of Non-Reference Services to a Prospective User.

38. A Reference Service is a Service that is specified in an Access Arrangement and for which a Reference Tariff is specified in that Access Arrangement under section 3.3 of the Code:

> 3.3 An Access Arrangement must include a Reference Tariff for:
>
> (a) at least one Service that is likely to be sought by a significant part of the market; and
>
> (b) each Service that is likely to be sought by a significant part of the market and for which the Relevant Regulator considers a Reference Tariff should be included.

39. Only those Services likely to be sought by a significant part of the market and for which the Authority considers there should be a price need to have a Reference Tariff specified. For other Services, section 6 of the Code provides a process of negotiation and arbitration for determining the price.

40. The Services Policy under the proposed Access Arrangement provides a description of a single Reference Service, described as a firm Service.

41. The Services Policy does not include a description of any Service other than the single proposed Reference Service. However, the Services Policy indicates that GGT also offers “Negotiated Services” for Users who desire a Service other than the Reference Service. It is indicated that these Services are to be developed through a negotiation process to meet specific needs. Clause 4.2(a) of the proposed Access Arrangement provides an undertaking by GGT to negotiate such Services in good faith. Further, clause 4.2(b) of the proposed Access Arrangement states that no provision of the Access Arrangement necessarily limits or circumscribes the terms or conditions which may be negotiated for the provision of one or more Negotiated Services.

42. In assessing the proposed Services Policy, the Authority is required to consider the Services that a significant part of the market is likely to seek. One or more such Services must be included in the Access Arrangement and must be described. If the Authority forms the opinion that other Services should also be included then they must also be included and described. Of these Services only one that is sought by a significant part of the market need be specified as a Reference Service, although the Authority must consider whether any of the other Services that are likely to be sought by a significant part of the market should also be included as a Reference Service.

Characteristics of the Proposed Reference Service

43. The Services Policy indicates that GGT will make the Reference Service available to customers for the receipt of gas at a single Inlet Point, transmission through the Pipeline and delivery to the agreed Outlet Point or Outlet Points. Gas quantities able to be received and delivered under a Service Agreement for a firm service are defined

as upper limits in terms of Maximum Daily Quantity ("**MDQ**") and Maximum Hourly Quantity ("**MHQ**").

44. GGT has included this Service in the Services Policy for the stated reason that the only Service sought by current Users has been a firm Service and GGT believes that such a requirement is unlikely to change in the future.

45. The Authority is of the view that as a forward-haul, non-interruptible haulage Service provided on the basis of contracted capacity, the proposed Reference Service is in the nature of a Service typically provided by a gas transmission pipeline configured to transport gas from an "upstream" gas source to "downstream" delivery points, and is of the same nature as gas transmission Services provided by most other transmission pipelines in Australia. The Authority therefore considers that this Service is likely to be sought by a significant part of the market and therefore complies with the Code.

46. Submissions were made on the characteristics of the proposed Reference Service.

47. The GGP is currently configured with only one Inlet Point. A submission was made to the Authority that there may be some future demand for an interconnection between the DBNGP and GGP to allow a greater number of gas producers access to markets served by the GGP, therefore requiring further a further Inlet Point to the GGP. It was also submitted that amending the proposed Access Arrangement to provide that the Reference Service be capable of accommodating alternative and multiple Inlet Points in a single Service Agreement in the event that additional Inlet Points are established on the pipeline, has the potential to enhance competition amongst gas producers for supply of gas to end Users of gas that are supplied via the GGP.

48. GGT submits that there has been no demonstrable demand for further Inlet Points and that appropriate terms and conditions for a Service with a different Inlet Point from the existing Inlet Point cannot be determined in advance of the new Inlet Point being established.

49. The Reference Service being offered in the proposed Access Arrangement requires gas to be delivered into the pipeline via the existing Inlet Point and does not allow gas to be delivered into the pipeline via any additional Inlet Points which may be constructed during the Access Arrangement Period. A User wishing to access any additional Inlet Point which is added to the pipeline would not have a right to do so as part of the Reference Service. The Authority is of the view that not allowing for additional Inlet Points obstructs the potential for enhanced competition in upstream gas markets and the benefits to Users that may flow from such competition.

50. It would not be onerous for GGT to accommodate in a Reference Service a facility for gas receipt into the GGP at any additional Inlet Points that are added to the pipeline. This would not place any obligation upon GGT to provide additional Inlet Points, to offer an interconnection Service with the DBNGP or to finance the construction of any additional Inlet Points, but would merely prevent GGT from refusing Users access to any additional Inlet Points in the event that they are created.

51. Taking these matters into account, the Authority is of the view that the Services Policy should provide for an additional Reference Service in the nature of that proposed by GGT, but without restriction in respect of Inlet Points.

52. Concerns were also raised in submissions about whether there is a need to specify the terms and conditions that would apply in respect of any additional Inlet Points. Other pipelines (including the DBNGP) have multiple Inlet Points without any special terms and conditions relating to the individual Inlet Points. The Authority does not consider there to be a practical requirement to specify special terms and conditions for different Inlet Points within the terms and conditions for a gas transmission Service such as proposed by GGT as a Reference Service. As such, the Authority sees no reason why the terms and conditions for the additional Service should differ from the terms and conditions for the Reference Service proposed by GGT save in respect of removing the restriction on the Inlet Point. Moreover, the Authority sees no reason why the Reference Tariff for the additional Service should differ from that determined for the Reference Service proposed by GGT.

Inclusion of Additional Services as Reference Services

53. Submissions were made to the Authority that GGT should, in its proposed Access Arrangement, offer additional Services as Reference Services, such as a parking Service, a back-haul Service, an authorised imbalance Service and an interruptible Service.

54. GGT submits that there is no demonstrable demand for an interruptible Service and that any needs of Users for such a Service would largely be met through the proposed "Supplementary Quantity Option" (provided for under clause 4 of the General Terms and Conditions and addressed in paragraph 452 and following of this Amended Draft Decision) that enables Users to obtain additional Services on a short term and interruptible basis. Further, GGT submits that it has not received any request for an interruptible Service.

55. The Authority has considered whether a back-haul Service, a parking Service, an authorised imbalance Service and/or an interruptible Service should be included in the Access Arrangement as a Reference Service.

56. The Authority takes the view that it is currently unlikely that a back-haul Service would be sought by a significant part of the market, particularly as the Carnarvon Basin is the sole source of gas supply to the GGP.

57. The Authority is aware that the parking and authorised imbalance Services are not generally offered as Reference Services by other pipeline Service Providers but rather are in the nature of ancillary Services associated with a Reference Service. Further, the Supplementary Quantity Option appears to provide a facility that would allow Users to address imbalances (by contracting for additional gas receipts and/or deliveries on a short term basis), thus providing a similar facility to an authorised imbalance Service.

58. The Authority has considered the submission of a party that, depending upon the terms and conditions upon which an interruptible Service was offered, it would consider using such a Service. The Authority accepts that it may be desirable for a

Service Provider to offer an interruptible Service as such a Service provides a mechanism for efficient use of pipeline capacity that is not available with sufficient reliability to be used to provide a firm (i.e. non-interruptible) Service. However, GGT has proposed an alternative mechanism for the utilisation of this capacity – the Supplementary Quantity Option. The Supplementary Quantity Option appears to be in the nature of a "spot Service" or "authorised overrun Service" (i.e. selling of capacity on a daily basis) that would utilise capacity that may otherwise be offered for an interruptible Service, and which could be used to meet the demand for gas transmission that arises on an irregular basis. The Authority does not consider there to be sufficient evidence that, given the availability of the Supplementary Quantity Option, an interruptible Service would be likely to be sought by a significant part of the market.

59. It is the view of the Authority that no party has provided any compelling reasons as to why there is likely to be a demand by a significant part of the market for additional References Services, including Services in the nature of a parking Service, a back-haul Service, an authorised imbalance Service or an interruptible Service.

Reference Tariff and Reference Tariff Policy

Requirements of the Code

60. Section 3.3 of the Code requires that an Access Arrangement include a Reference Tariff for:

> (a) at least one Service that is likely to be sought by a significant part of the market; and
>
> (b) each Service that is likely to be sought by a significant part of the market and for which the Relevant Regulator considers a Reference Tariff should be included.

61. Section 3.4 of the Code cross references section 8 of the Code for the principles with which a Reference Tariff must comply:

> Unless a Reference Tariff has been determined through a competitive tender process as outlined in sections 3.21 to 3.36, 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.

62. Section 3.5 of the Code requires that, in addition to a Reference Tariff, an Access Arrangement must include a Reference Tariff Policy:

> An Access Arrangement must also include a policy describing the principles that are to be used to determine a Reference Tariff (a ***Reference Tariff Policy***). A Reference Tariff Policy must, in the Relevant Regulator's opinion, comply with the Reference Tariff Principles described in section 8.

63. As referred to in sections 3.4 and 3.5 of the Code, section 8 of the Code sets out the principles with which Reference Tariffs and a Reference Tariff Policy included in an Access Arrangement must comply.

64. Section 8.1 of the Code provides that 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.

65. Section 8.1 of the Code also provides guidance as to the reconciliation of these objectives:

> 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.

66. In respect of the reconciliation of objectives of section 8.1 of the Code, "the factors in s 2.24(a) to (g) should guide the Regulator in determining, if necessary, the manner in which the objectives in s 8.1(a) to (f) can best be reconciled or which of them should prevail".[9]

67. In addition to the objectives set out in section 8.1 of the Code, section 8.2 of the Code requires that the Authority be satisfied about a number of factors in determining whether to approve a Reference Tariff and Reference Tariff Policy:

(a) the revenue to be generated from the sales (or forecast sales) of all Services over the Access Arrangement Period (the Total Revenue) should be established consistently with the principles and according to one of the methodologies contained in this section 8;

(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 on forecasts) is calculated consistently with the principles contained in this section 8;

(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 section 8;

(d) Incentive Mechanisms are incorporated into the Reference Tariff Policy wherever the Relevant Regulator considers appropriate and such Incentive Mechanisms are consistent with the principles contained in this section 8; and

(e) any forecasts required in setting the Reference Tariff represent best estimates arrived at on a reasonable basis.

Reference Tariff Policy

68. GGT has provided a Reference Tariff Policy as clause 5 of the proposed Access Arrangement, reproduced as follows.

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[9] Epic Decision, ibid, Declaratory Order 3.

5 REFERENCE SERVICE TARIFF POLICY

5.1 Transportation Tariff for Reference Service

GGT will make available the Reference Service at the Transportation Tariff as set out in clause 9 of the General Terms and Conditions, as varied in accordance with the provisions of this clause 5.

5.2 Reference Service Tariff Policy

The Transportation Tariff has been determined having regard to:

(a) the Reference Tariff Principles described in section 8 of the Code where the rate of return used in setting the Transportation Tariff is commensurate with the business risks taken in development of the Pipeline in accordance with the GGP Act;

(b) recovery of actual and forecast Pipeline costs and efficient capital and operating costs and a commercial rate of return; and

(c) a Net Present Value tariff determination methodology.

5.3 Variation of Transportation Tariff

Except as expressly provided in the Service Agreement, the Transportation Tariff will be adjusted in accordance with clause 9 of the General Terms and Conditions.

69. The Reference Tariff Policy (at clause 5.3) cross references clause 9 of the General Terms and Conditions for the Reference Service. Clause 9 of the General Terms and Conditions defines the component charges of the Reference Tariff for the proposed Firm Service, being the Toll Charge, the Capacity Reservation Charge, the Throughput Charge, the Used Gas Charge and the Supplementary Quantity Option Charge, and makes provision for other charges: the Account Establishment Charge, Connection Charge and Annual Account Management Charge. Clause 9 also makes provision for:

- Quantity Variation Charges;
- quarterly escalation of charges in accordance with changes in the consumer price index;
- provision for Users to pay to GGT amounts equal to any tax, duty, impost, levy or other charge (excluding income tax) imposed by the government or other regulatory authority from time to time incurred by GGT or the Owners in respect of the Service provided pursuant to the Service Agreement;
- provision for pass through of the goods and services tax;
- provision for charges to still apply when the flow of gas is restricted in accordance with clauses 8 (Interruption of Service) and 17 (Force Majeure) of the General Terms and Conditions; and
- provision for GGT to demand a bond or deposit from a User.

70. The Reference Tariff Policy proposed by GGT is largely declaratory of provisions and principles of the Code, in particular indicating:

- the Reference Service will be made available at a Reference Tariff set out in the General Terms and Conditions;
- the Reference Tariff has been determined having regard to the principles of section 8 of the Code and recovery of costs (including a rate of return), and using a net-present-value methodology; and
- the Reference Tariff is subject to adjustment over the Access Arrangement Period.

71. The general principles expressed in the Reference Tariff Policy are consistent with the requirements of the Code. The Code provides for:

- recovery by a Reference Tariff of capital and operating costs (sections 8.8 – 8.22, 8.36 and 8.37 of the Code);
- determination of a Reference Tariff on the basis of a rate of return commensurate with business risks and able to be described as commercial in the sense of being commensurate with prevailing conditions in the market for funds (section 8.30);
- determination of a Reference Tariff using a Net Present Value calculation (section 8.4); and
- changes in the Reference Tariff in accordance with a price path that may provide for escalation of tariffs with a measure of inflation (sections 8.3, 8.5A).

While the Authority is of the view that the Reference Tariff Policy complies with the requirements of the Code, this does not mean that the Authority takes the view that application of the Reference Tariff Policy in calculation and specification of the Reference Tariff meets the requirements of the Code. The Authority's considerations in respect of particular elements of the derivation of the Reference Tariff are described below.

72. In determining whether to approve or not approve the proposed Access Arrangement, the Authority must reach a view on whether the proposed Reference Tariff and Reference Tariff Policy comply with the principles of section 8 of the Code, guided by the objectives of section 8.1 and, as necessary to resolve conflict between these objectives, the factors of section 2.24(a) to (g).

73. In forming its view on whether the proposed Reference Tariff and Reference Tariff Policy comply generally with the principles and objectives of section 8 of the Code, the Authority examined the components of GGT's derivation of Total Revenue and the Reference Tariff for the Reference Service against the relevant principles contained in section 8 of the Code. The Authority's considerations in this regard are documented below.

74. The Authority has also considered the proposed Reference Tariff in the context of the potential term of the Access Arrangement Period, as discussed later in this Amended Draft Decision (paragraph 676 and following).

Initial Capital Base

75. Sections 8.4 and 8.5 of the Code set out methodologies that may be used to determine a Total Revenue for a pipeline:

> 8.4 The Total Revenue (a portion of which will be recovered from sales of Reference Services) should be calculated according to one of the following methodologies:
>
> **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***).
>
> **IRR**: The Total Revenue will provide a forecast Internal Rate of Return (IRR) for the Covered Pipeline that is consistent with the principles in sections 8.30 and 8.31. The IRR should be calculated on the basis of a forecast of all costs to be incurred in providing such Services (including capital costs) during the Access Arrangement Period.
>
> The initial value of the Covered Pipeline in the IRR calculation is to be given by the Capital Base at the commencement of the Access Arrangement Period and the assumed residual value of the Covered Pipeline at the end of the Access Arrangement Period (***Residual Value***) should be calculated consistently with the principles in this section 8.
>
> **NPV**: The Total Revenue will provide a forecast Net Present Value (NPV) for the Covered Pipeline equal to zero. The NPV should be calculated on the basis of a forecast of all costs to be incurred in providing such Services (including capital costs) during the Access Arrangement Period, and using a discount rate that would provide the Service Provider with a return consistent with the principles in sections 8.30 and 8.31.
>
> The initial value of the Covered Pipeline in the NPV calculation is to be given by the Capital Base at the commencement of the Access Arrangement Period and the assumed Residual Value at the end of the Access Arrangement Period should be calculated consistently with the principles in this section 8.
>
> The methodology used to calculate the Cost of Service, an IRR or NPV should be in accordance with generally accepted industry practice.
>
> However, the methodology used to calculate the Cost of Service, an IRR or NPV may also allow the Service Provider to retain some or all of the benefits arising from efficiency gains under an Incentive Mechanism. The amount of the benefit will be determined by the Relevant Regulator in the range of between 100% and 0% of the total efficiency gains achieved.
>
> 8.5 Other methodologies may be used provided the resulting Total Revenue can be expressed in terms of one of the methodologies described above.

76. All of the methodologies described in section 8.4 of the Code for the determination of Total Revenue require, for their application, a valuation of the capital assets that form the Covered Pipeline at the commencement of the Access Arrangement Period (“**Capital Base**”). As such, a Capital Base is required to be established when a Reference Tariff is first proposed for a Reference Service (“**Initial Capital Base**”).

77. In the Access Arrangement Information supporting the proposed Access Arrangement, GGT has proposed that the Initial Capital Base for the Goldfields Gas Pipeline should be $452.6 million, described by GGT as a Depreciated Optimised Replacement Cost (“**DORC**”) value and including a value ascribed to capital not

valued as part of the pipeline itself ($3.8 million less $0.4 million depreciation) and working capital ($2.6 million).[10]

78. The Authority is required to consider whether this value conforms to the principles of the Code, having regard to the role of the Initial Capital Base in determination of the Reference Tariff. In order to determine whether the proposed Initial Capital Base conforms to the principles of the Code, it is necessary to consider the requirements of the Code in the particular circumstances of the GGP.

79. Section 8.10 of the Code requires that a range of factors be considered in establishing the Initial Capital Base:

> 8.10 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:
>
> (a) the value that would result from taking the actual capital cost of the Covered Pipeline and subtracting the accumulated depreciation for those assets charged to users (or thought to have been charged to users) prior to the commencement of the Code;
>
> (b) the value that would result from applying the "depreciated optimised replacement cost" methodology in valuing the Covered Pipeline;
>
> (c) the value that would result from applying other well recognised asset valuation methodologies in valuing the Covered Pipeline;
>
> (d) the advantages and disadvantages of each valuation methodology applied under paragraphs (a), (b) and (c);
>
> (e) international best practice of Pipelines in comparable situations and the impact on the international competitiveness of energy consuming industries;
>
> (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;
>
> (g) the reasonable expectations of persons under the regulatory regime that applied to the Pipeline prior to the commencement of the Code;
>
> (h) the impact on the economically efficient utilisation of gas resources;
>
> (i) the comparability with the cost structure of new pipelines that may compete with the pipeline in question (for example, a Pipeline that may by-pass some or all of the Pipeline in question);
>
> (j) the price paid for any asset recently purchased by the Service Provider and the circumstances of that purchase; and
>
> (k) any other factors the Relevant Regulator considers relevant.

80. Section 8.10 of the Code sets out a range of matters to be considered in establishment of the Initial Capital Base "that by their nature require consideration of disparate issues which may well tend in different directions".[11] The process is "more than one of mere valuation".[12] Exercise of discretion by the Authority is required in

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[10] Access Arrangement Information, section 4.5. Sections 4.1 to 4.4 of the Access Arrangement Information provide information in support of this determination of the Initial Capital Base.

[11] Epic Decision, ibid, p 534.

[12] Epic Decision, ibid, p 534.

establishing the value of the Initial Capital Base, taking into account the considerations under section 8.10 and attaching weight to these considerations.[13]

81. Guidance for the Authority's discretionary evaluation is provided by other sections of the Code, notably sections 8.11, 8.1, and section 2.24.[14]

82. For convenience, this Amended Draft Decision addresses these relevant elements of the Code in the order of sections 8.10, 8.11, 8.1 and 2.24.

83. Section 8.10(a) of the Code requires that consideration be given to:

> the value that would result from taking the actual capital cost of the Covered Pipeline and subtracting the accumulated depreciation for those assets charged to Users (or thought to have been charged to Users) prior to the commencement of the Code.

84. The value that would result from taking the actual capital cost of the Covered Pipeline and subtracting the accumulated depreciation for those assets charged to Users is referred to for the purposes of this Amended Draft Decision as the Depreciated Actual Cost (**"DAC"**).

85. GGT submits that the "actual capital cost" of the GGP should be taken to be the purchase price of the GGP by the current owners.[15]

86. The Authority rejects this interpretation and considers that the determination of the DAC value under the Code requires an assessment of the historical construction costs. While the term "actual cost" is not defined in the Code, use of the term throughout section 8 of the Code, including in relation to both the Initial Capital Base and New Facilities Investment, is consistent with a meaning of the cost of construction of the relevant assets. This is also consistent with considerations of the Supreme Court in the Epic Decision.[16]

87. For the purposes of section 8.10(a) the Authority has therefore given consideration to the cost of construction of the GGP, including capital expenditure subsequent to initial construction, and to the return of capital (capital recovery) to the pipeline owners since the pipeline entered into service.

88. In its submission of 17 December 2002, GGT described a calculation of capital recovery involving determination of a residual asset value at any point in time. This calculation is a recursive calculation, which essentially consists of three equations, as follows:

$$OAV_t = OAV_{t-1} + Capex_{t-1} - Capital\ Recovery_{t-1} \qquad (1)$$

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[13] Epic Decision, ibid, p 534.

[14] The Authority notes that this process for consideration of the Initial Capital Base for a pipeline is different to the process contemplated by the Australian Competition Tribunal in its review of the decision of the ACCC to approve its own Access Arrangement for the Moomba to Sydney Pipeline (*Application by East Australian Pipeline Limited* [2004] ACompT 8). The Authority's reasons for not adopting the process contemplated by the Australian Competition Tribunal are set out in Appendix A of this Amended Draft Decision.

[15] Goldfields Gas Transmission Pty Ltd, 17 December 2002, Public Submission on Stage 1 as Required by the 6 November 2002 Notice of the Acting Gas Access Regulator.

[16] Epic Decision, ibid, p 558.

$Capital\ Recovery_t = Revenue_t - ROA_t - Opex_t$ (3)

$ROA_t = WACC_t \times OAV_t$ (2)

Where:

OAV_t = opening asset value for year t;

$OAV_{t\text{-}1}$ = opening asset value for year t-1;

$Capex_{t\text{-}1}$ = capital expenditure for year t-1;

$Opex_t$ = operating expenditure for year t;

ROA_t = return on assets for year t;

$WACC_t$ = weighted average cost of capital for year t; and

$Revenue_t$ = revenue from sale of Services for year t.

In the first period of any expenditure being undertaken, *OAV* is zero, which permits the recursive calculation to be undertaken.

89. Under this methodology, the return of capital to the pipeline owners in any period is determined as the excess of revenue over the sum of operating costs and a return on capital, where the latter is determined by multiplying a rate of return by the opening asset value for the period. The return of capital thus determined may be positive (an excess of revenue over operating costs and the return on capital) or negative (a deficit of revenue below operating costs and the return on capital). The change in asset value from one period to the next is equal to the opening asset value for the period plus new capital expenditure in the period minus the return of capital in the period. Where the return on capital for a period is determined to be negative, the "loss" is capitalised into the asset value. This is consistent with a notion of economic depreciation. Interest during construction is taken into account under this methodology, determined (in effect) as a capitalised loss on costs of construction before the pipeline enters service.

90. In its submission of 17 December 2002, GGT indicated that the asset value determined by this methodology is $553.4 million at 30 June 2002.[17] The value determined by the same calculation methodology as at 31 December 1999 is $568.4 million. Contrary to its proposed Access Arrangement, GGT indicated in its submission that $553.4 million at 30 June 2002 should comprise the Initial Capital Base for the GGP.

91. The calculation described by GGT is, in principle, consistent with the methodology contemplated by section 8.10(a) of the Code. However, the calculation is highly sensitive to the methodologies and assumptions used in making it. The principal factors that affect the value obtained by the calculation are:

[17] Goldfields Gas Transmission Pty Ltd, 17 December 2002, Public Submission on Stage 1 as Required by the 6 November 2002 Notice of the Acting Gas Access Regulator.

- whether the calculation is undertaken in nominal or real dollar values;
- the length of periods in the calculation for each of which an amount of capital recovery is determined (i.e. monthly, quarterly, annually, etc.); and
- the assumption as to the benchmark rate of return.

92. Other significant input parameters to the calculation of capital recovery comprise:
    - revenues;
    - capital expenditure;
    - a value attributed to working capital; and
    - operating expenditure.

93. The residual value obtained by the capital recovery calculation will also depend upon the date at which the value is determined.

94. The Authority has considered a range of assumptions for the calculation of capital recovery and residual asset values, and determined residual asset values at a range of dates. This analysis and the resultant asset values are described in Appendix B.

95. Through this analysis the Authority has verified the calculation of the residual asset value described by GGT in its submission of 17 December 2002.

96. However, these calculations also confirm that the estimation of a DAC value using a calculation of capital recovery of the type proposed by GGT can give rise to widely varying asset values depending upon the assumptions employed in the model and the date of valuation.

97. Section 8.10(a) of the Code requires that consideration be given to a value that would result from calculation of a DAC. To meet this requirement, the Authority considers that it is necessary to determine a methodological approach and set of assumptions in calculating capital recovery that represent the most plausible assessment of historical capital recovery.

98. The Authority takes the view that the most plausible methodological approach and set of assumptions are as follows.
    - Calculation in real dollar values.
    - Determination of capital recovery relative to a benchmark rate of return equal to the estimated cost of capital for the GGP business. For this purpose, the Authority has established the benchmark rate of return at the Rate of Return established for the purposes of this Amended Draft Decision (paragraph 248 and following), but varied according to market parameters (risk-free rates of return, inflation and corporate taxation rates) for each time period in the historical calculation of capital recovery.

- Determination of revenue for each period in the calculation taking into account notional revenues from the original owners of the pipeline and notional revenues from third-party Users reflecting discounts to tariffs available to Users from time to time.

Reasons for use of this methodological approach and these assumptions are indicated in Appendix B.

99. The residual asset values calculated for a range of different valuation dates under this methodological approach and set of assumptions are indicated in the table below. The calculation of these values is described in Appendix B. The reduction in values from 31 December 1999 to 30 June 2004 indicates the extent of recovery of the initial capital investment.

Asset Values Estimated by Calculation of Capital Recovery under a Methodological Approach and Assumptions considered most plausible by the Authority

Valuation Date	Valuation
31 Dec 1999	$434 million
30 June 2002	$376 million
31 Dec 2003	$292 million
30 Jun 2004	$261 million

100. The Authority is of the view that the values set out in the above table indicate the values at different points in time that would accord with section 8.10(a) of the Code.

101. The Initial Capital Base of $452.6 million proposed by GGT, while described as a DORC value, is considered by the Authority to be more in the nature of a depreciated historical cost for the reason that it was determined on the basis of the historical cost of construction of the pipeline, subsequent capital expenditure and an allowance for depreciation. The methodology used by GGT to derive the proposed Initial Capital Base was to adjust the actual construction cost of the pipeline (stated by GGT to be $456.6 million) for inflation, interest cost incurred during construction and foreign exchange variations to derive an historical cost in dollar values of 31 December 1999 of $506.7 million. This value was then adjusted by subtracting an allowance for depreciation determined by applying an accounting depreciation methodology (units-of-production depreciation) and adding a value of capital expenditure since construction to derive a valuation of $450.0 million. The proposed Initial Capital Base was derived by the sum of this value and an allowance for working capital of $2.6 million.[18]

102. In the April 2001 Draft Decision on the proposed Access Arrangement for the GGP, the Regulator derived a DAC value by a similar methodology, using GGT's stated value of construction costs, subtracting an allowance for depreciation determined by an alternative accounting depreciation methodology (straight-line depreciation), and inflating the asset valuation to a value at 31 December 1999 of $435.4 million.

[18] Access Arrangement Information section 4.1.2.

103. The Authority is of the view that the capital-recovery calculation set out in GGT's submission of 17 December 2002 is a more appropriate methodology for determination of a DAC value than either the methodology used by GGT to determine its proposed Initial Capital Base, or that used by the Regulator for the purposes of the April 2001 Draft Decision. The Authority considers that neither of these latter methodologies attempts to estimate the actual return of capital over the life of the pipeline, to which the calculation of capital recovery is specifically directed, but rather use an assumed value of depreciation calculated using an accounting depreciation methodology that is unrelated to actual past depreciation.

104. Section 8.10(b) of the Code requires that consideration be given to:

> the value that would result from applying the Depreciated Optimised Replacement Cost methodology in valuing the Covered Pipeline.

105. GGT has described its proposed Initial Capital Base as a Depreciated Optimised Replacement Cost ("**DORC**") value. However, the Authority considers that the calculation used to derive this value is more in the nature of an historical cost valuation, as discussed above in relation to section 8.10(a) of the Code.

106. For the purposes of the April 2001 Draft Decision, the Regulator estimated:

- Replacement Cost and Depreciated Replacement Cost, estimated on the basis of historical constraints on design of the pipeline arising from the *Goldfields Gas Pipeline Agreement Act 1994*; and

- Optimised Replacement Cost ("**ORC**") and DORC, estimated on the basis of the pipeline meeting the service levels required by clause 9(5) of the *Goldfields Gas Pipeline Agreement Act 1994*, but there being no constraints on pipeline diameter or operating pressure.

107. Estimates of Depreciated Replacement Cost and DORC were based on straight-line depreciation of asset classes over an assumed technical life for each asset class, corresponding to a weighted average asset life of 65 years. Estimated values were determined as follows.

Goldfields Gas Pipeline – Replacement Cost Valuations

Description	Depreciated Replacement Cost (DRC)	Depreciated Optimised Replacement Cost (DORC)
Maximum Allowable Operating Pressure (MAOP) (MPa)	10.2	10.2
Diameter (millimetre)	400/350	350
Diameter (inch)	16/14	14
Compressor Stations (Number)	2	3
Design Capacity (TJ/d)[19]	98	98
Compressed Capacity (TJ/d)	170	158
Replacement Cost ($million*)	450	432
Depreciated Value ($million*)	**425**	**407**

* Dollar values at 31 December 1999

108. The Authority makes the following observations on these valuations.

- The ORC of the GGP ($432 million) is $18 million less than the estimated replacement cost ($450 million). The main reason for the lower ORC value is that, under the optimised design, a smaller diameter was assumed for the pipeline section to Newman as compared with the existing system compensated for by an additional compressor station providing the same level of service as the larger pipeline section, but at a lower overall cost.

- The Replacement Cost of $450 million is close to the reported actual cost of construction of the Goldfields Gas Pipeline ($456.6 million).[20] Recognising that the costs are based on "desktop" estimates, the difference of $6.5 million between the actual cost and the estimated Replacement Cost is not considered by the Authority to be material.

109. GGT has disputed the Authority's estimate of the DORC value on the basis that use of straight-line depreciation over an assumed weighted-average asset life of 65 years to derive a DORC value from Optimised Replacement Cost value is inconsistent with the theoretical concept of a DORC value, and is inappropriately based on an assumption of technical asset life of 65 years rather than an economic life of 42 years.[21]

110. The conceptual basis to the derivation of a DORC value is the alignment of the forward-looking costs of operating an old (i.e. existing) asset with a new asset. That is, the difference in asset value between an existing and a new asset is equal to the difference in the value of future cash flows taking into account the different costs of

[19] The Initial Reserved Capacity, as defined by sub-clause 8(3)(b) of the *Goldfields Gas Pipeline Agreement Act 1994,* was advised by the Department of Resources Development to be 98TJ/d.

[20] Access Arrangement Information, section 4.1.3.2.

[21] Goldfields Gas Transmission, 13 July 2001, Public Submission No. 1 on Draft Decision for the Goldfields Gas Pipeline Proposed Access Arrangement, pp 18–28.

operating each asset and the different timing in replacement expenditures for each asset. The conceptually correct method of estimating the DORC value would be by an assessment of forward-looking costs of operation of the old and new assets rather than applying an accounting method for depreciation, such as straight-line depreciation or, indeed, annuity depreciation (as proposed by GGT). The Authority is of the view that, in the absence of determinations as to the service potential of assets and as to increases in operating and maintenance expenditure as the assets age, straight-line deprecation – which assumes a constant rate of decline in value of the assets – is, while an abstraction, not an unreasonable assumption. The Authority therefore accepts, for the purposes of this Amended Draft Decision, a DORC value of the GGP as $407 million at 31 December 1999.

111. GGT has also disputed the relevance of the DORC value derived by the Regulator on the basis that if the pipeline were to be constructed at the present time, it is likely that the Government would require greater "over-sizing" of the pipeline than it did in 1994.[22] GGT does not, however, explain why this consideration should be relevant to a DORC value which relates to a consideration of an optimum design of the pipeline to deliver a particular level of service and to which other factors that may be considered in construction of a new pipeline are not relevant. The Authority is therefore not able to accept GGT's contention in this respect.

112. Section 8.10(c) of the Code requires that consideration be given to:

> the value that would result from applying other well recognised asset valuation methodologies in valuing the Covered Pipeline.

113. In its submission of 17 December 2002, GGT described valuation of the GGP by calculation of past capital recovery taking into account past under-recovery of capital relative to a benchmark rate of return. This calculation could comprise a well recognised asset valuation methodology under section 8.10(c); although the Authority considers that this calculation is consistent with the methodology contemplated by section 8.10(a) and has therefore addressed it in its consideration of that section of the Code.

114. The Authority has estimated values for the GGP assets using Replacement Cost and Depreciated Replacement Cost valuations, as described in relation to a DORC valuation under section 8.10(b) of the Code (paragraphs 106 and 107). These valuations may also be regarded as well-recognised valuation methodologies under the provisions of section 8.10(c).

115. A further valuation methodology that may be considered under section 8.10(c) is a value as revealed by the sale of the asset and the price paid.

116. The GGP changed ownership in the period December 1998 to March 1999, when it was purchased by the current GGT joint venture. GGT has provided information to the Authority indicating that WMC Resources sold its 63 percent share for approximately $402 million and Normandy Pipelines sold its 25 percent share for

[22] Goldfields Gas Transmission Pty Ltd, 17 December 2002, Public Submission on Stage 1 as Required by the 6 November 2002 Notice of the Acting Gas Access Regulator.

approximately $147 million.[23] While the sale of the remaining share by BHP Minerals was conducted in conjunction with the sale of other assets and the sale price of the pipeline assets could not be separately determined, GGT estimated the full sale price of the Goldfields Gas Pipeline to be approximately $624 million, on the basis of the proportionate values of the shares sold by WMC and Normandy.

117. GGT's calculation of the implied purchase price of the regulated assets of the GGP was based upon information from the two transactions involving Southern Cross Pipelines (its purchase of 62.664 percent in October 1998 from WMC and its purchase of 25.493 percent in February 1999 from Normandy), as well as an adjustment to remove the value of non-regulated assets. The following observations are made concerning GGT's submitted estimate of the implied purchase price.

- GGT has stated that Southern Cross Pipelines bought its interests for $550 million, whereas the value was actually $542 million.[24]
- GGT ignored information from BHP's sale of its interest to Duke on the basis that BHP sold its interest bundled with various other assets (including power stations and the Pilbara Energy Project),[25] which the Authority considers to be a reasonable approach in inferring a purchase price for the GGP assets in their totality.
- GGT assumed that the various laterals had a purchase value of $24 million, if the correct sale price to Southern Cross Pipelines of $542 million is used, or $32 million if the higher value of $550 million is used.

118. There is evidently some margin of error in attributing an implied sale price to the GGP assets. However, the Authority is prepared to accept for the purposes of this Amended Draft Decision that the total purchase price for the GGP when purchased by the current owners was in the order of $620 million.

119. Section 8.10(d) of the Code requires that consideration be given to:

> the advantages and disadvantages of each valuation methodology applied under paragraphs (a), (b) and (c).

120. Neither section 8.10(d) nor the remainder of section 8.10 provides guidance as to the assessment of advantages of different valuation methodologies, although the valuation methodologies may be considered and evaluated on their merits.[26]

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[23] Access Arrangement Information, section 4.1.2.

[24] Normandy Mining announced on 2 February 1999 the sale of its 25.493 per cent share in the GGP and its Parkeston lateral to Southern Cross Pipelines for $140 million (Normandy Mining, 'Goldfields Pipeline Interest Sold', Report to Shareholders, 2 February 1999). Western Mining Corporation (WMC) announced on 1 October 1998 the sale of its 62.664 per cent share in the GGP and the laterals connecting WMC mines to Southern Cross Pipelines for $402 million (WMC Limited, 'Agreement to Sell WA Pipeline Assets', Company Announcements, 1 October 1998).

[25] ASX Release, Document No. 144110 (ASX website). The total value of the package of assets was $509 million.

[26] Epic Decision, ibid, p 534.

121. The valuation methodologies considered in this Amended Draft Decision under paragraphs (a), (b) and (c) are:

- Depreciated Actual Cost determined under the provisions of section 8.10(a) by calculation of historical capital recovery using the general method described by GGT in its submission of 17 December 2002;
- Depreciated Optimised Replacement Cost, determined under section 8.10(b);
- Replacement Cost and Depreciated Replacement Cost, which may be considered as other well-recognised valuation methodologies under provisions of section 8.10(c); and
- the value as revealed by the cost of purchase of the GGP assets by the current owners, which may be considered as another well-recognised valuation methodology under provisions of section 8.10(c).

122. An in-principle advantage of a DAC valuation is that it provides for recovery by the owner of an asset of the actual investment undertaken in construction of the asset and, to the extent that capitalised losses are taken into account, any further explicit or implied investment by the pipeline owners in developing the pipeline business. As such, one effect of the use of a DAC methodology for determination of the Initial Capital Base may be to reduce sovereign risk for investors in pipeline assets, in the sense that introduction of the Code as a new regulatory regime would not result in the erosion of the ability of investors to charge prices for pipeline Services that are sufficient to obtain a return on, and a return of, the value of the original investment.

123. In the context of the determination of the DAC value by the Authority under section 8.10(a) of the Code, using an estimate of past capital recovery over and above a benchmark rate of return, this reduction in sovereign risk would extend to providing assurance that GGT would have an Initial Capital Base determined consistent with recovery over time of the value of investment in the GGP and a rate of return on investment equal to the estimated cost of capital for the project. However, the reduction of sovereign risk would not extend to ensuring that GGT is able to retain the benefits that have been legitimately gained to the date of valuation through a past tariff regime that embodied a rate of return higher than GGT's cost of capital. This is an issue in the case of the GGP and is given further attention later in this Amended Draft Decision.

124. A further advantage of the DAC valuation methodology is that the methodology typically derives a value based on actual accounting records and therefore relies less on the individual judgement of the person undertaking the valuation than would be required under other valuation techniques, and it is auditable. This is, however, dependent upon adequate records of initial expenditure, historical returns to the capital assets being valued and historical depreciation of the assets being valued. Depreciation allowances evident from accounting statements do not necessarily provide an accurate representation of "true" depreciation of assets (i.e. the actual return of capital to asset owners from revenues gained by use of the regulated assets). Accounting records are maintained for purposes other than monitoring returns of capital and depreciation allowances are typically determined on the basis of considerations other than an explicit recovery of invested capital. There is no reason

to presume that accounting depreciation (and, consequently, the book value of assets) will bear any relation to the explicit or implicit recovery of invested capital through prices of Services.

125. For the GGP, historical records were available to the Authority for costs incurred in construction and operation of the pipeline and for revenues gained from third-party Users. However, there have been no records kept of revenues gained from, or attributed to, the original owners of the pipeline. Nor are records available of depreciation of the pipeline assets. While the capital-recovery calculation described by GGT attributes values to these revenues and depreciation, the making of assumptions in respect of these values requires judgement to be exercised – particularly in respect of a benchmark rate of return against which capital recovery is determined. Moreover, judgement is required in respect of methodological approaches to the calculation. As is evident from the Authority's consideration of this calculation methodology, the asset value derived by the calculation of capital recovery is highly sensitive to these methodological approaches and assumptions.

126. A DAC valuation methodology also has the disadvantage that asset redundancy and technological obsolescence are not reflected in the asset value. While this may be to the advantage of the asset owner (through reducing risk in returns to the original investment), the asset valuation methodology does not reflect changes in values of assets that may occur in competitive markets where advances in technology or redundancy of assets may necessitate write-downs of asset value. While a DAC value would shelter the asset owner from such reductions in asset value, a revenue requirement calculated on the basis of an historical cost of assets would not necessarily bear any relation to the pipeline owner's future revenue requirement for the maintenance and replacement of capital assets.[27] This would be contrary to the replication of outcomes in competitive markets, which is an explicit objective for a Reference Tariff under section 8.1(b) of the Code.

127. The advantages and disadvantages of a DORC valuation methodology are, as a general proposition, opposite to the advantages and disadvantages of a DAC valuation methodology.

128. A DORC valuation methodology has the in-principle advantage that tariffs based on that valuation should replicate the tariff outcomes of a competitive market. Service Providers in a competitive market would be forced by competitive pressures to value assets on an optimised replacement cost basis and to depreciate those assets at the lowest rate consistent with recovering sufficient revenue to replace the assets as or when the need arises. Consequently, Service Providers in a competitive market would be setting prices on a similar basis of capital costs. By the same argument, tariffs corresponding to an asset value that is different to the DORC value may return the Service Provider a revenue stream that is greater than or less than that sufficient to maintain provision of Services over the long-term.

129. The principal disadvantage of a DORC valuation methodology is that it disregards the actual value of historical investment in pipeline assets and as such may create

[27] Ergas, H., 2000. Some economic aspects of asset valuation, paper presented at the ACCC Asset Valuation Forum 16 June 2000.

sovereign risk in the regulatory valuation of assets. This risk may favour the pipeline owner if there is an upwards re-valuation of the asset relative to depreciated historical cost, or may be contrary to the interests of the pipeline owner if there is a downwards re-valuation of the assets relative to depreciated historical cost.

130. There are also practical difficulties in arriving at a DORC valuation of assets. A DORC valuation requires subjective judgement in determining design criteria for an optimised asset (such as target service levels) and in deriving an optimised design. Given that an optimised replacement cost should generally be the most efficient means of replacing assets to provide the same level of service, subjective decisions need to be made as to whether a replacement cost should be based on assets that are just sufficient to provide the current level of service, or whether some market growth should be allowed for and excess capacity accommodated in the replacement costs. Judgement is also often exercised in determining an extent of optimisation of the hypothetical replacement asset, in particular whether the asset should or should not be constrained to be fundamentally the same as the existing system (for example in terms of route and major design parameters).

131. The advantages and disadvantages of a Depreciated Replacement Cost methodology for asset valuation contain elements of the advantages and disadvantages of the DAC and DORC methodologies. As a replacement cost is determined on the basis of the as-constructed design of the pipeline, the prospect of a regulatory value determined on this basis presents less sovereign risk to the investors in the pipeline than, for example, a DORC value, as the resultant regulatory asset value would tend to more closely reflect costs incurred by investors in actual construction of the pipeline. Such a reduction in risk may have particular significance for the GGP where the as-constructed design of the pipeline was constrained by statutory requirements under the State Agreement. However, there may still be subjectivity in the estimation of replacement costs as well as risks of windfall gains or losses if the asset valuation differs from the depreciated historical cost of the pipeline.

132. An asset valuation based on a value evident from the sale of a pipeline has an advantage of generally being an accurate indication of the value of investment of current owners, at least as it was perceived at the time of purchase of the assets. However, such a value is not necessarily an appropriate regulatory value of assets as it may be influenced by a range of factors that are not of relevance to a regulatory value such as, for example, taxation advantages to be gained through an asset purchase and regulatory rates of return being in excess of the purchaser's cost of capital. Purchase prices and market values of regulated pipeline assets in Australia and overseas have been demonstrated to generally comprise multiples of known regulatory values[28] indicating that a range of factors may operate to increase market values of assets above regulatory values. Also, the purchase price of an asset may not reflect reasonable commercial judgement, as was determined by the Regulator to be the case in respect of the purchase by Epic Energy of the DBNGP in 1998.[29] There is no

[28] The Allen Consulting Group, August 2003, *Review of the Gas Code: Commentary on Economic Issues* Chapter 5 (Report appended to BHP Billiton Initial Submission to the Productivity Commission Review of the Gas Code, September 2003, www.pc.gov.au/inquiry/gas/subs/sublist.html).

[29] Independent Gas Pipelines Access Regulator, May 2003, Final Decision on the Proposed Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline.

obvious reason why any of these factors should be reflected in regulatory values of assets.

133. Section 8.10(e) of the Code requires that in establishing the Initial Capital Base for a Pipeline, consideration be given to international best practice of Pipelines in comparable situations and the impact on the international competitiveness of energy consuming industries.

134. To the extent that section 8.10(e) requires consideration of international practice in regulation, the Authority has considered precedents for international practice in asset valuation for regulatory purposes as established in the UK and USA. Regulators in the USA have historically relied upon historical cost valuations of assets as a basis for rate-of-return regulation. Regulators in the UK have tended to use replacement cost valuation methods of assets, such as DORC valuations, as a basis for price-cap or revenue-cap regulation. Regulators in the UK have also on occasions utilised a "market valuation" approach to asset valuation for privatised utility companies, typically involving establishing asset values as the market value of company stocks after some period of trading, or some multiple or fraction of this value. In these cases, the market values have been below the value of replacement cost of assets, and multipliers greater than one have been applied on some occasions to cause the regulatory asset value to be closer to the replacement cost.[30] However, as market valuations depend on expectations of regulatory decisions and vice versa, it has been recognised that such a valuation approach could create a bias towards higher asset values.[31]

135. The Authority does not consider there to be any established or generally accepted "international best practice" in asset valuation. However, valuation of the Initial Capital Base of the GGP at a DORC value would be supported by regulatory precedent in the UK, and a value calculated on the basis of historical cost and past capital recovery is supported by regulatory precedent in the USA.

136. It is also notable that as a new regulatory regime in Australia, the Code has not been implemented retrospectively. That is, there has not been any explicit attempt by regulators to determine tariffs (and Initial Capital Base values) in such a manner as to "claw back" past returns to Service Providers above those that might be established under the Code going forward.

137. Section 8.10(f) of the Code requires that, in establishing the Initial Capital Base for a Pipeline, consideration be given to 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.

138. Tariffs for use of the GGP by third-party Users have in the past been set under the State Agreement.

139. Sub-clause 22(1) of the State Agreement provides that third-party tariffs must be fair and reasonable and consistent with tariff setting principles approved by the Minister:

[30] Whittington, G., 1994. Current cost accounting: its role in regulated utilities, *Fiscal Studies* 15(4): pp 88-101.

[31] Whittington, G., 1994. Current cost accounting: its role in regulated utilities, *Fiscal Studies* 15(4): pp 88-101.

> 22 (1) Contracts for transmission of natural gas and associated services negotiated by the Joint Venturers with Third Parties must incorporate tariffs that are fair and reasonable and consistent with the tariff setting principles approved by the Minister under this Agreement.

140. Sub-clause 9(1)(l) of the State Agreement required the joint venturers under that agreement to submit to the Minister detailed proposals for development of the GGP including proposals in respect of tariff setting principles:

> 9 (1) Subject to and in accordance with the EP Act, the laws relating to traditional usage and the provisions of this Agreement, the Joint Venturers shall, within 6 months of the date of agreement on the route for the Pipeline pursuant to Clause 7 (or thereafter within such extended time as the Minister may allow as hereinafter provided), submit to the Minister to the fullest extent reasonably practicable their detailed proposals (including plans where practicable and specifications where reasonably required by the Minister) with respect to the construction and operation of the Pipeline, which proposals shall include the location, area, Pipeline route in accordance with Clause 7, lay-out, design, quantities and estimated costs, materials and time programme for the commencement and completion of construction or the provision (as the case may be) of each of the following matters, namely:
>
> …
>
> l. tariff setting principles to apply to Third Parties other than Initial Customers in respect of the Initial Committed Capacity;
>
> …

141. In November 1994, the Goldfields Gas Transmission joint venturers provided the Minister for Resources Development with proposals for the construction and operation of the GGP in accordance with requirements under Clause 9 of the State Agreement. These proposals included the proposed tariff setting principles. The tariff setting principles that were ultimately approved by the Minster ("**Tariff Setting Principles**") are appended to this Amended Draft Decision as Appendix C.

142. Tariffs for the GGP were established by GGT in January 1995, known generally as the "**A1 Tariff**".

143. In March 1998, GGT reduced third-party tariffs to approximately 85 percent of the value of the A1 Tariff (the "**A2 Tariff**"), although this reduction has been described by GGT as an offering of discounts rather than a reduction in the tariff per se. Further "discounts" to tariffs were introduced from 1 July 1999 (the "**A3 Tariff**") and 1 January 2000 (the "**A4 Tariff**"). On 21 December 2001, GGT re-introduced the A1 Tariff.

144. These tariffs applied to third-party Users of the GGP, but not to the transmission of gas by the original owners. However, in guiding the determination of third-party tariffs, the Tariff Setting Principles indicate that for the purposes of assessing the recovery of costs and a commercial rate of return for the pipeline owner, "the Owners of the pipeline will be ascribed a notional tariff based on third-party tariffs for their utilisation of Pipeline capacity reserved to the Owners …".

145. As the Tariff Setting Principles determined, in part, the basis upon which tariffs have been set in the past, the economic depreciation of the pipeline and the historical returns to the Service Provider, the Authority considers that the Tariff Setting

Principles, and the Government's administration of the State Agreement as it relates to the determination of tariffs in accordance with the Tariff Setting Principles, are relevant considerations under the terms of section 8.10(f).

146. The Authority also accepts that the calculation of historical capital recovery as described by GGT in its submission of 17 December 2002 is a relevant consideration under section 8.10(f) of the Code as it purports to reflect the basis on which tariffs have been set in the past and the historical returns to the Service Provider and is, in effect, a calculation of the economic depreciation of the GGP.

147. The Authority does not accept, however, that the assumptions made by GGT in applying its calculation of historical capital recovery are necessarily the most appropriate assumptions in reflecting considerations under section 8.10(f) of the Code.

148. The Authority has considered alternative assumptions in respect of the calculation of capital recovery, in relation to:

- calculation of capital recovery by a real, rather than nominal, calculation;
- the benchmark cost of capital with reference to which the recovery of capital is determined;
- whether the cost of capital is fixed over time or varied in accordance with variation in corporate taxation rates and market interest rates;
- whether notional revenues attributed to the initial owners of the pipeline are determined to reflect a 7.5 percent discount in tariffs that was offered to foundation third-party Users of the pipeline; and
- whether notional revenues from the initial owners of the pipeline and third-party Users of the pipeline are determined to reflect the discounts to tariffs introduced from 1998.

149. The Authority has calculated capital recovery under assumptions in respect of each of these matters that the Authority considers reflect the manner in which tariffs have been determined in the past. This analysis and calculation is described in Appendix D.

150. On the basis of these assumptions, the Authority has estimated residual asset values for the GGP consistent with the past determination of tariffs for a range of valuation dates, as follows.

Asset values estimated by calculation of capital recovery under a methodological approach and assumptions considered by the Authority to reflect past determination of tariffs

Valuation Date	Valuation
31 Dec 1999	$495 million
30 June 2002	$501 million
31 Dec 2003	$474 million
30 Jun 2004	$465 million

151. Section 8.10(g) requires that, in establishing the Initial Capital Base for a Pipeline, consideration be given to the reasonable expectations of persons under the regulatory regime that applied to the Pipeline prior to the commencement of the Code.

152. On the assumption that the tariff setting provisions in the State Agreement are a "regulatory regime" for the purposes of section 8.10(g), the Authority has considered the expectations that persons (including both GGT and Users of the GGP[32]) may reasonably hold as to the value of pipeline assets in light of the provisions applying to the Goldfields Gas Pipeline. In this context, the Authority has given attention to clause 9 and sub-clause 22(1) of the State Agreement (as described in paragraphs 139 and 140, above).

153. The Authority has given particular attention to the Tariff Setting Principles that applied prior to the commencement of the Code, of which the second principle is that:

> Tariffs will be set to provide a commercial rate of return on all project capital, including all Owners' costs, reasonably incurred in the construction and operation of the Pipeline and to recover all reasonable Pipeline operating, maintenance and administration costs. The commercial rate of return shall be commensurate with the business risk associated with the project.
>
> …

154. The Authority is of the view that the principle of a commercial rate of return on costs incurred in the construction of the pipeline is consistent with establishing an Initial Capital Base under the Code based on actual costs of construction, such as a DAC value.

155. GGT submits that section 8.10(f), together with section 8.10(g), provides justification for establishing the Initial Capital Base at a value determined by calculation of capital recovery. In particular, GGT submits that by virtue of the State Agreement and the Tariff Setting Principles, it is reasonable that Users and the owners of the GGP would have expected that tariffs would be set by GGT and not by the Authority; that GGT would recover all project capital costs of the pipeline; that tariffs would be set to provide a commercial rate of return on all project capital; and that introduction of the Code would have no material adverse effect on the legitimate business interests of the pipeline owners. GGT has also submitted that to not establish the Initial Capital Base

[32] Epic Decision, ibid, pp559 - 560.

and tariffs in accordance with these expectations would be inconsistent with the publicised intent of State Agreements.[33]

156. The Authority takes the view that to the extent that the administration of the State Agreement had effect as a regulatory regime, it could have created expectations that the past approach to the setting of tariffs under that regime would continue. In this respect, any matters relevant under section 8.10(g) point in the same direction as matters under section 8.10(f).

157. The past approach to the setting of tariffs is described above in relation to a consideration of matters under section 8.10(f).

158. However, the Authority is of the view that tariffs put in place under the Tariff Setting Principles did not necessarily comply with those principles. There is evidence to suggest that the past approach to the setting of tariffs has resulted in tariffs being established that embody a rate of return to GGT that is substantially in excess of a commercial rate of return. In particular, the agency of the Western Australian State Government with responsibility for administration of the State Agreement (the Department of Industry and Resources, previously the Department of Resources Development) previously commissioned studies of tariffs for the GGP that advised that rates of return embodied in, or implied by, the tariffs have been excessive.[34]

159. Notwithstanding that the results of the studies obtained by the State Government on the rates of return indicated that tariffs had been excessive, the fact that the past and current tariffs for the GGP were able to be established and maintained under the administration of the State Agreement (and continue to be maintained) could well have contributed to expectations that those tariffs would continue. To the extent that this is correct, the Authority's re-determined asset value from a calculation of capital recovery under assumptions reflecting the past determination of tariffs (as set out above in respect of section 8.10(f) of the Code) may reflect the reasonable expectations of persons under the State Agreement.

160. Section 8.10(h) of the Code requires that in establishing the Initial Capital Base for a Pipeline, consideration be given to the impact on the economically efficient use of gas resources.

161. The Authority takes the view that section 8.10(h) requires that valuation of the Initial Capital Base be consistent with providing signals to investors that motivate a longer-term efficient level of investment in gas transmission assets, with a consequent effect of engendering efficient development and utilisation of gas resources. The Authority recognises that there is a potential disincentive upon investment of adjusting regulatory values away from values reflecting the historical cost of the pipeline assets. Avoiding this disincentive may necessitate a treatment of past investment in a similar

[33] Goldfields Gas Transmission, 13 July 2001, Public Submission No. 1 on Draft Decision for the Goldfields Gas Pipeline Proposed Access Arrangement. Goldfields Gas Transmission Pty Ltd, 17 December 2002, Public Submission on Stage 1 as Required by the 6 November 2002 Notice of the Acting Gas Access Regulator.

[34] Details of the advice are described in Appendix B and the Confidential Annexure of this Amended Draft Decision.

manner as for new capital investment, that is, valuation of the Initial Capital Base on the basis of historical costs.

162. The Authority also recognises that pipeline Services should be priced to reflect the efficient costs of providing the Services, including the cost of capital. The Authority is of the view that calculation of historical capital recovery with reference to a rate of return that is in excess of the cost of capital for the pipeline business would result in an asset valuation that does not reflect efficient costs of providing the pipeline Services.

163. This has occurred with GGT's calculation of capital recovery, as set out in its submission of 17 December 2002. In its calculation of capital recovery GGT assumed a benchmark rate of return of 18.81 percent (nominal), equal to the original estimate of the WACC proposed to the Western Australian Government at the commencement of construction of the GGP.

164. The Authority is of the view that the rate of return assumed by GGT is a substantial over-estimate of the true cost of capital for the GGP business. Taking the WACC estimated by the Authority for the purposes of this Amended Draft Decision (paragraph 248 and following) as a guide, and varying this estimate according to corporate taxation rates and market interest rates in each period from 1994 to 2002, indicates that the cost of capital assumed by GGT for the purposes of modelling capital recovery overestimated the true cost of capital in each year by between four and nine percentage points. The calculation of capital recovery relative to a more realistic benchmark rate of return (based on the WACC estimated by the Authority for the purposes of this Amended Draft Decision but adjusted for historical capital market parameters) was described above in relation to section 8.10(a) of the Code (paragraphs 94 to 96). The Authority considers that the values derived by this calculation are more reflective of efficient costs of providing gas transmission Services.

165. A DORC value might also be consistent with efficient use of gas resources. In principle, a value of the Initial Capital Base substantially in excess of a DORC value may lead to economically inefficient utilisation of gas resources by increasing the delivered cost of gas to economically inefficient levels, and inefficient use of energy sources generally, due to inefficient fuel mixes being used for electricity generation and other energy requirements of industry.

166. In relation to section 8.10(h) of the Code, GGT has referred to the offering by GGT in September 1999 of the "Economic Development Tariff", comprising a discounted tariff intended to promote use of the pipeline. From a lack of response to the offered discounted tariff, GGT concluded that the gas transport markets served by the GGP are comparatively price inelastic to the price of gas transmission. GGT appears to suggest that by virtue of this relative price inelasticity, the effect on utilisation of gas resources is not an important consideration in establishing the value of the Initial Capital Base. The Authority does not accept this. While for a range in price of gas transmission, demand for gas transmission and for gas may not be sensitive to this price, there would be a range in price for gas transmission over which the price may affect the choice of natural gas over alternative fuel types, and affect the efficient utilisation of gas resources. Moreover, the Authority is of the view that demand for transmission at any point in time will be dependent on many factors in addition to the

price of gas transmission, including for example, the timing of gas-consuming projects and the existence of sunk investment in utilising other energy sources. The absence of additional demand in any particular period is not seen as evidence that the efficient use of gas resources would be unaffected by prices of gas transmission in excess of the forward-looking efficient costs of Service provision.

167. Section 8.10(i) of the Code requires that in establishing the Initial Capital Base for a Pipeline, consideration be given to the comparability of the cost structure of new Pipelines that may compete with the Pipeline in question (for example, a Pipeline that may by-pass some or all of the Pipeline in question).

168. The Authority is not aware of any evidence to suggest that there may be new pipelines constructed that would compete in full or in part with the GGP.

169. Section 8.10(j) of the Code requires that in establishing the Initial Capital Base for a Pipeline, consideration be given to the price paid for any asset recently purchased by the Service Provider and the circumstances of that purchase.

170. The Authority accepts that it would be appropriate to give consideration under this section to an imputed price paid for the GGP by the current owners, as has already been considered as an alternative valuation methodology under section 8.10(c) of the Code (paragraphs 115 to 117). The Authority considers, however, that the relevant matters for consideration are the same as those given to the imputed purchase price under sections 8.10(c) and 8.10(d) (paragraph 132).

171. Section 8.10(k) of the Code requires that in establishing the Initial Capital Base for a Pipeline, consideration be given to any other factors that the Relevant Regulator considers relevant.

172. The Authority considers that a further factor that is a relevant consideration in establishing the Initial Capital Base for the GGP is the value of capital recovery by GGT that has occurred since 31 December 1999. As indicated by the Authority's determination of a DAC value under section 8.10(a) of the Code (paragraphs 94 to 96), calculation of capital recovery relative to a benchmark rate of return based on the Authority's estimate of the WACC for the GGP, as set out in this Amended Draft Decision, indicates a substantial level of capital recovery to 30 June 2004. The estimated value of capital recovery since 31 December 1999 is approximately $235 million in dollar values at 31 December 1999.[35] Setting an Initial Capital Base and a Reference Tariff that recognise and account for this value of capital recovery would be consistent with the interests of Users and the broader public interest in having prices for gas transmission services reflect the efficient costs of provision of these services. However, this may be regarded as contrary to the legitimate business interests of the owners of the pipeline in retaining benefits lawfully gained during the process of finalising the Access Arrangement prior to its commencement date, which

[35] The value of $235 million is not equal to the difference in DAC values determined at 31 December 1999 and 30 June 2004, as indicated in paragraph 99. The reason for this is that the DAC values indicated in paragraph 99 include the value of capital expenditure in the period between 1 January 2000 and each valuation date, and that the DAC values indicated in paragraph 99 are expressed in dollar values at each date of valuation rather than in dollar values at 31 December 1999.

could introduce an element of sovereign risk in the introduction and application of the Code. Both of these matters are considered further below in relation to sections 8.11, 8.1 and 2.24 of the Code.

173. Section 8.11 of the Code 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, being the DAC and DORC values respectively.

174. Determination of whether there are any circumstances in valuation of the Initial Capital Base for a pipeline that are "abnormal" in the sense that they may justify valuation outside of the range contemplated by section 8.11 is a matter requiring the exercise of judgement and discretion by the Authority.[36]

175. As set out above, the Authority has determined the DAC value of the GGP to be in the order of $434 million at 31 December 1999 and lower values at later valuation dates, and the DORC value to be in the order of $407 million at 31 December 1999.

176. The Authority has given consideration to whether there are any circumstances that could provide a basis for setting the Initial Capital Base outside of the range of these values.

177. The Authority accepts the submission by GGT that a relevant factor in determining a value of the Initial Capital Base is recognition that the as-constructed design of the pipeline was constrained by design requirements under the State Agreement. However, the Authority is of the view that such historical constraints on construction of the GGP may be taken into account in determination of a DAC value, and therefore provide no reason to consider the circumstances of the GGP to be abnormal in the context of section 8.11.

178. A further factor to consider under section 8.11 may be the past administration of the State Agreement in respect of determination of third-party tariffs. It is evident from the analysis of capital recovery undertaken by the Authority that the third-party tariffs established for the GGP have embodied a rate of return that is substantially in excess of the likely cost of capital for the GGP. The manner of administration of the State Agreement by the Western Australian Government allowed these tariffs to become entrenched under the Tariff Setting Principles and may have created an expectation that the high rate of return would continue.

179. A number of factors examined in respect of section 8.10 of the Code point to reasons why the benefits that have been legitimately gained by GGT through the charging of tariffs established under the State Agreement should not be taken away. These reasons relate to the avoidance of sovereign risk for GGT, and avoidance of a perception of sovereign risk by other parties in respect of dealings with the Western Australian Government. In this regard, the Authority would consider sovereign risk as arising in the event that a new regulatory regime was introduced (in this case the Code) and applied to a particular regulated business in such a manner as to take away from the owners of that business the benefits legitimately and lawfully gained under a

[36] Epic Decision, ibid, p 534.

previous regulatory regime. The Authority considers that there is potential for sovereign risk of this nature to occur for the owners of the GGP in the event that an Initial Capital Base determined within the range of DAC and DORC would effectively take back some of the benefits gained by GGT through charging of the past and current third-party tariffs. Accordingly, the Authority is of the view that the presence of such risk is cause to consider the circumstances of the GGP to be abnormal in the context of section 8.11.

180. Notwithstanding this, the Authority does not consider that a reasonable avoidance of sovereign risk in respect of introduction of a new regulatory regime requires that the benefits of a prior regime should be entrenched indefinitely. In this regard, the Authority notes that at the time that the current owners of the GGP purchased their respective shares of ownership, the Western Australian Government had committed to implementation of the national access regime for natural gas pipelines through signing on 7 November 1997 of the National Gas Pipelines Access Agreement. While third-party access provisions of the *Goldfields Gas Pipeline Agreement Act* were deemed to comply with the Code to 1 January 2000,[37] there was no derogation under this agreement providing for the exclusion of the GGP from regulation under the Code, and the current owners of the GGP would or should have been aware of this.

181. Section 8.1 of the Code sets out the objectives for a Reference Tariff and Reference Tariff Policy in an Access Arrangement. The Authority must seek to achieve these objectives in the establishment of the Initial Capital Base for a pipeline. Consequently, the objectives of section 8.1 guide the Authority in the exercise of its discretion in balancing the factors considered under section 8.10.[38] Where the objectives of section 8.1 conflict in their application, the factors set out in section 2.24(a) to (g) of the Code guide the Authority in determining “the manner in which they can best be reconciled or which of them should prevail”.[39]

182. In relation to the objectives set out in section 8.1 of the Code, the Authority has considered different possible values of the Initial Capital Base including the value of $452.6 million proposed by GGT, as well as values in the range of those values determined in accordance with the requirements and factors of section 8.10 of the Code, as summarised in the following table.

[37] Council of Australian Governments, 7 November 1997, National Gas Pipelines Access Agreement, Annex I.

[38] Epic Decision, ibid, pp 534, 536.

[39] Epic Decision, ibid, pp 536 – 537.

Alternative Asset Values

Derivation of Valuation	Valuation Date and Valuation ($million)*			
	31 Dec 1999	30 Jun 2002	31 Dec 2003	30 Jun 2004
GGT Proposal	452.6			
DAC	434	376	292	261
DORC	407			
DRC	425			
Purchase Price	620			
Value recognising factors of s.8.10(f)	495	501	474	465

* Dollar values at the date of valuation except for the purchase price, which is an imputed sale price for the entire pipeline from multiple transactions between December 1998 and March 1999

183. Section 8.1(a) of the Code indicates that a Reference Tariff and Reference Tariff Policy 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 over the expected life of the assets used in delivering that Service.

184. In considering section 8.1(a), it is first necessary to determine what might be meant by "recovery of efficient costs". Section 8.1(a) should not be interpreted as implying that the Service Provider be allowed "at least" efficient costs, nor limited to "at most" efficient costs,[40] rather section 8.1(a) relates to an opportunity of the Service Provider to recover efficient costs.

185. The Authority has considered two possible interpretations of efficient costs, as follows.

- Firstly, costs and efficiency may be considered from an historical perspective, i.e. that the Service Provider should be provided with the opportunity to recover capital costs that were "efficient" at the time the expenditure occurred. Such a treatment of historical capital costs would be consistent with the treatment under the Code of New Facilities Investment. The cost of New Facilities Investment is rolled into the Capital Base provided that, in terms of section 8.16(a), it does not exceed "the amount that would be invested by a prudent Service Provider acting efficiently, in accordance with accepted good industry practice, and to achieve the lowest sustainable cost of delivering Services". There is no subsequent reconsideration of the regulatory value of the New Facilities Investment.

- Secondly, efficient cost can be considered from a forward-looking perspective, i.e. that the Service Provider should be given the opportunity to recover the forward-looking minimum cost of either asset replacement at the end of the life of the asset, or capital investment of a replacement or renewal nature that is necessary to maintain the service capacity of the asset.

[40] Epic Decision, ibid, pp 553 – 554.

186. The values derived by the DAC methodology under section 8.10 of the Code, being equal to the estimated un-recovered capital costs of the pipeline assets, would be consistent with the first of these two concepts of efficient costs if the historical costs of construction were efficient at that time. A DAC valuation that is adjusted for past under recovery of capital would be more consistent with this concept of economic efficiency than a DAC value derived by a conventional calculation (i.e. that takes into account only capital recovery (depreciation) and not under-recovery). As such, the DAC values determined consistent with the general methodology of the capital recovery calculation described by GGT in its submission of 17 December 2002 would be, subject to assumptions made in the application of this methodology application, consistent with this concept of efficiency. It is noted that the value derived by the DAC methodology at 31 December 1999 is $434 million, and the estimated DAC value declines rapidly to a value of $261 million at 30 June 2004, reflecting GGT's charging of tariffs for the GGP that implies a rate of return substantially in excess of the estimated cost of capital for the GGP business.

187. The DAC values would not, however, necessarily be consistent with the second concept of efficient costs. From a forward-looking perspective in regulation, a DAC value would not necessarily result in tariffs being determined on the basis of efficient capital costs and "best-practice" in provision of Services, nor would it necessarily take into account redundancy or obsolescence of assets. As a consequence, a revenue requirement calculated on the basis of an historical cost of assets does not necessarily bear any relation to the Service Provider's future revenue requirement for the maintenance and replacement of capital assets.[41] Again, the older the assets and the greater the extent of changes in price levels and relative prices since the time of capital investment, the more likely it is that a DAC value will not reflect a forward-looking efficient capital cost of Service provision.[42]

188. A value of the Initial Capital Base closer to the DORC value of $407 million at 31 December 1999 would, in principle, be more consistent than a DAC value with the forward-looking concept of efficiency, taking into account the costs of replacement of assets with current technology and best practice. The Authority notes that re-determination of a DORC value at later valuation dates would return values lower than the value determined for 31 December 1999 (consistent with the assumed straight-line depreciation of the pipeline assets over a greater period), although the value would not decline as quickly as the estimated DAC values.

189. Section 8.1(b) of the Code requires that a Reference Tariff and Reference Tariff Policy should be designed with a view to replicating the outcome of a competitive market.

190. The outcome of a competitive market should be interpreted in terms of a workably competitive market, and the outcome of a competitive market is one of economic efficiency or, at least, greater efficiency, albeit not necessarily limited to only a forward-looking view of efficiency. Rather, in a workably competitive market, past

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[41] Ergas, H., 2000. Some economic aspects of asset valuation, paper presented at the ACCC Asset Valuation Forum 16 June 2000.

[42] Ergas, H., 2000. Some economic aspects of asset valuation, paper presented at the ACCC Asset Valuation Forum 16 June 2000.

investments and risks taken may provide some justification for prices above the efficient level.[43]

191. As already indicated in respect of section 8.1(a) of the Code, efficiency and efficient costs may be considered from either an historical or a forward-looking perspective. An Initial Capital Base established close to the value derived by a DAC methodology is, in principle, consistent with a Service Provider recovering the efficient capital cost of assets, and is therefore consistent with the outcome of a workably competitive market.

192. An Initial Capital Base established close to the value derived by a DORC methodology would meet that part of the objective of section 8.1(b) that involves a forward-looking view of efficient costs. A DORC valuation of assets would replicate the tariff outcomes of a competitive market, on the reasonable presumption that Service Providers in a competitive market would be forced by competitive pressures to value assets on an optimised replacement cost basis and to depreciate those assets at the lowest rate consistent with recovering sufficient revenue to replace the assets as and when the need arises.

193. It is evident from the calculation of capital recovery that a DAC value may be in excess of the DORC value, depending upon assumptions made in respect of historical capital recovery. In such cases, the residual asset value determined from the capital-recovery calculation may be consistent with an historical recovery of efficient costs (and consistent with the concept of a workably competitive market), but inconsistent with a forward-looking view of the outcome of a competitive market.

194. It is also evident from the calculation of capital recovery that a DAC value may be less than the DORC value (as would occur for the later valuation dates indicated in the table of paragraph 182), again depending upon assumptions made in respect of historical capital recovery and depreciation. In these cases, the DORC value would be consistent with recovery by the Service Provider of the residual (un-depreciated) value of the historical capital investment.

195. In a submission made to the Authority, GGT stated that because the pipeline was built subsequent to a competitive tendering process, the as-built design of the pipeline is the outcome of a competitive market.[44] The Authority does not consider this to be a relevant consideration under section 8.1(b), for the reason that the Authority takes the view that "competitive market" as contemplated by section 8.1(b) and in the context of the proposed Access Arrangement for the GGP is a competitive market in provision of gas transmission Services, and not competition in the assigning of rights to build the GGP, as referred to by GGT. However, notwithstanding this, if the competitive process by which the original owners of the GGP won the right to construct the pipeline imposed some discipline on the owners to be efficient in the costs of construction, then this factor would give weight to a value close to a DAC value for the pipeline being consistent with enabling the current pipeline to recover historical efficient costs.

[43] Epic Decision, ibid, pp 554 – 555.

[44] Goldfields Gas Transmission Pty Ltd, 17 December 2002, Public Submission on Stage 1 as Required by the 6 November 2002 Notice of the Acting Gas Access Regulator.

196. Section 8.1(c) of the Code requires that a Reference Tariff and Reference Tariff Policy should be designed with a view to ensuring the safe and reliable operation of the Pipeline.

197. Achieving this objective may require that attention be given in the design and assessment of every "Reference Tariff consideration" to ensuring that the revenue stream will be sufficient to meet safety and reliability needs as and when that is necessary.[45] In respect of valuation of the Initial Capital Base, this may imply that in order to ensure that a Service Provider is able to obtain sufficient revenue to operate the pipeline safely and reliably, a value of the Capital Base should be determined so as to ensure that, through the rate of return on this Capital Base, sufficient revenue is able to be generated by provision of the Reference Service at the Reference Tariff. Other elements of the Reference Tariff determination are also important to ensure that a Service Provider has adequate cash flows to ensure safe and reliable operation of a pipeline, including forecast operating expenditure, forecast capital expenditure and depreciation, which may also be set so as to affect the revenue able to be obtained by a Service Provider.

198. Meeting the objective of section 8.1(c) through the value of the Initial Capital Base would cause different values of the Initial Capital Base to be contemplated without reference to any particular methodology by which a value is derived. GGT has not made any submissions to the Authority indicating that any particular revenue requirements exist for the safe and reliable operation of the GGP and at present the Authority has no basis for not assuming that GGT's proposed value is consistent with providing sufficient revenue. In any event, provision can be made in the Non Capital Costs brought to account in determining the Reference Tariff for appropriate costs to be expended in the safe and reliable operation of the GGP.

199. Section 8.1(d) of the Code requires that a Reference Tariff and Reference Tariff Policy should be designed with a view to not distorting investment decisions in Pipeline transportation systems or in upstream and downstream industries.

200. In the Epic Decision, the Court focused on the first limb of this objective, being the objective of not distorting investment decisions in Pipeline transportation systems. In respect of valuation of the Initial Capital Base, the Court considered the objective as requiring that consideration be given to the effect of past investments on incentives for future investment.[46] This gave rise to the following statement by the Court in relation to consideration of historical investments in pipelines:[47]

> 154 So understood, it would be consistent with the objective reflected in s 8.1(d) if the Regulator, in an appropriate case, were to accept or to take into account the actual investment of the owner in a Covered Pipeline which existed at the time the Act and Code came into force, when establishing the initial Capital Base. This is not to suggest that reckless, mistaken or highly speculative investment decisions should be accepted for this purpose. Such decisions, of course, would be likely to be recognised as such by other investors. However, by virtue of s 8.1(d), it would appear that the outcome under the Code of an investment decision in a pipeline made before the introduction of the Code, even though that decision anticipated some

[45] Epic Decision, ibid, p 555.

[46] Epic Decision, ibid, p 556.

[47] Epic Decision, ibid, pp 556 – 557 (italics in original).

> "monopoly" profits, would not be irrelevant to the Regulator's deliberations, under s 8, including the establishment of the initial Capital Base.
>
> 155 The reasons of the Regulator in the draft decision reveal that he was well alert to another relevant aspect of the operation of the first limb of s 8.1(d). Future investment decisions in pipelines might well be distorted were it the case that *any* price paid by a service provider to acquire a pipeline, no matter how uncommercial, mistaken or reckless, should automatically be recognised as the initial Capital Base or value of the pipeline for the purposes of the Code. This would encourage the payment of excessive and unrealistic prices to acquire a pipeline in the expectation that the purchase price would be able to be recovered over the life of the pipeline under the Code. It follows that a price paid for a pipeline before the Code applied to it, will need to be carefully evaluated by the Regulator for the purposes of s 8.1(d).

201. The Court Decision could be interpreted as indicating that consideration should be given to investment in the sense of:

- the actual historical cost of construction of the assets; and
- the purchase price of the assets.

202. As noted above in relation to the objective of section 8.1(a) of the Code, determination of an Initial Capital Base equal to or above a DAC value would provide for recovery of initial investment in construction of pipelines, and indeed is consistent with treatment of New Facilities Investment under the Code. A valuation methodology that derives an Initial Capital Base value at or above the DAC value should, therefore, provide sufficient comfort to other investors in pipelines that actual capital costs of pipeline construction will be recognised in subsequent regulation, and not be to the detriment of incentives for efficient investment in pipeline construction.

203. There may also be broader considerations of incentives for investment in pipelines than treatment of past capital investment. For example, precedents established by the regulatory treatment of one pipeline may affect investment in other new or existing pipelines. An example of this is the possibility that establishing the Initial Capital Base of existing pipelines at a level in excess of DAC and DORC values would establish a precedent of more favourable regulatory treatment of an existing pipeline than would apply to a new pipeline. The Initial Capital Base of a Covered Pipeline constructed after the commencement of the Code is determined as the actual capital cost of construction, without exercise of discretion by a regulator. If a higher Initial Capital Base (and higher regulated tariffs) could be achieved by investment in an existing pipeline, rather than construction of a new pipeline (all other things being equal), then there is potential distortion of investment incentives away from investment in new pipelines to investment in existing pipelines. This could potentially be at a substantial cost to the public through distortion of investment incentives away from investment in new infrastructure towards investment that comprises a mere refinancing and change of ownership of existing infrastructure.

204. In conclusion, in relation to the first limb of section 8.1(d) of the Code, distortion of incentives for investment in new pipelines may occur if the Initial Capital Base is valued by a methodology that gives rise to values substantially in excess of the value of construction of the pipeline infrastructure, i.e. a DAC or DORC value in the vicinity of $407 million to $434 million at 31 December 1999, or lower values at either later valuation dates or taking into account capital recovery by GGT subsequent to 31 December 1999.

205. The second limb of section 8.1(d) of the Code focuses on incentives for investment in upstream and downstream industries. An asset value reflecting more than the efficient cost of the assets (DAC or DORC depending on whether an historical or forward-looking view is taken of efficient cost) would, in principle, give rise to tariffs that in turn give rise to higher costs to Users of gas and reduce investment in both gas-using industries and up-stream gas production. GGT's proposed Initial Capital Base of $452.6 million would be contrary to this objective. This would result in higher than efficient prices for gas transmission and higher than efficient costs in downstream industries.

206. Section 8.1(e) of the Code requires that a Reference Tariff and Reference Tariff Policy should be designed with a view to efficiency in the level and structure of the Reference Tariff.

207. The objective of section 8.1(e) has relevance to the determination of the Initial Capital Base to the extent that it deals with the level of the Reference Tariff. To the extent that the Reference Tariff reflects an Initial Capital Base that is in excess of a value that reflects an efficient cost of the capital assets (a value other than derived by a DAC value or DORC, reflecting different concepts of efficiency), the level of the Reference Tariff is not efficient. It may therefore be concluded that values of the Initial Capital Base in excess of $407 million to $434 million at 31 December 1999, or lower values at either later valuation dates or taking into account capital recovery by GGT subsequent to 31 December 1999, would be inconsistent with the objective of section 8.1(e) of the Code.

208. Section 8.1(f) of the Code requires that a Reference Tariff and Reference Tariff Policy should be designed with a view to providing an incentive to the Service Provider to reduce costs and to develop the market for Reference Services and other Services.

209. The Authority is of the view that provision of incentives for the Service Provider to develop the market for Reference Services and other Services relates to the structure of a Reference Tariff and the incentive mechanisms in the Reference Tariff Policy, rather than the capital or other costs considered in derivation of the Reference Tariffs. Section 8.1(f) is therefore of importance in establishing the structure of the Reference Tariff rather than the Initial Capital Base. The objective expressed in section 8.1(f) concerns the way in which tariffs and tariff policies can provide an incentive to reduce costs and to increase demand. The owner of an asset like a pipeline may have an incentive to maximise its profits by providing fewer Services at a higher price. This is the basic market distortion of monopoly pricing. Section 8.1(f) is directed at ensuring that the owner of the pipeline has an incentive to make profits by reducing costs and increasing demand, rather than by increasing prices. As such, section 8.1(f) appears to have little direct bearing on the determination of the Initial Capital Base.

210. In summary, the objectives in section 8.1 when applied to the GGP do not point to a particular value for the Initial Capital Base. Some objectives are best met by a value close to DAC and others by a value close to DORC but, unlike section 8.11 (as discussed in paragraphs 173 and following), none of the objectives point to a value substantially outside of the range of DAC and DORC, being values of between $407 million to $434 million at 31 December 1999, or lower values at either later valuation dates or taking into account capital recovery by GGT subsequent to 31 December 1999.

211. Given the conflicting guidance provided by section 8.1 of the Code in consideration of the value of the Initial Capital Base, the Authority has given consideration to the factors of section 2.24 of the Code.

212. Section 2.24(a) requires that the Authority give consideration to the Service Provider's legitimate business interests and investment in the Covered Pipeline.

213. The Authority considers that there are a range of matters of relevance to a consideration of the legitimate business interests of GGT in the context of the Initial Capital Base for the GGP.

214. Firstly, and as already noted above, the as-built design of the GGP was constrained under the State Agreement and thus possibly limited the ability of the original owners to build the pipeline to a design appropriate for the market for gas as it then existed, and to minimise the cost of pipeline construction. GGT submits that both the previous and current owners of the GGP accepted the risk of building an "oversized" pipeline because of the perception that this risk was minimised by the provisions of the State Agreement that provided for capital recovery. Consideration of the legitimate business interests of GGT in this context would tend to support a value of the Initial Capital Base that is consistent with providing GGT with the opportunity to recover the value of capital investment in the pipeline, including the value of past capital "under recovery". This consideration supports a value of the Initial Capital Base close to the value of $434 million determined as a DAC value at 31 December 1999, or lower values at either later valuation dates or taking into account capital recovery by GGT subsequent to 31 December 1999.

215. A second matter of relevance in relation to the legitimate business interests of GGT is the past history of tariff setting for the GGP under the State Agreement, and the past administration of that regime, which has provided for tariffs that imply a rate of return to GGT substantially in excess of a reasonable estimate of the cost of capital for the GGP. GGT has legitimately – in the sense of lawfully – been able to charge those tariffs to third-party Users of the GGP. Consideration of legitimate business interests of GGT in this respect is cause for weight to be given to a value of the Initial Capital Base that is consistent with GGT retaining the benefits gained by the charging of those tariffs. The value of the Initial Capital Base that would recognise this interest is that of $495 million at 31 December 1999 (and corresponding values at later valuation dates as indicated in the table of paragraph 182). Recognition of this interest is a factor consistent with determination of a value of the Initial Capital Base above the range of values between DAC and DORC, consistent with expectations stemming from the past administration of the State Agreement in respect of third-party tariffs.

216. Under sections 2.24(e) and 2.24(f) of the Code, the Authority is required to take into account the public interest, including the public interest in having competition in markets, and the interests of Users and Prospective Users.

217. The concept of the public interest in section 2.24(e) of the Code reflects the objective of the promotion of a competitive market but also has regard to wider considerations which may include "the protection of the interests of the owners of pipelines and the assurance of fair and reasonable conditions being provided where their private rights are overborne by the statutory scheme …".[48]

218. The Authority takes the view that there are two elements of the public interest that have relevance to consideration of the Initial Capital Base for the GGP. The first is the public interest in having prices for gas – which include a component that is the price of gas transmission – that reflect the efficient provision of gas transmission Services and the recovery of only efficient costs. This element of the public interest would cause the Authority to give weight to possible values of the Initial Capital Base that are closer to the DORC or Depreciated Replacement Cost, or lower values that would reflect estimates of past capital recovery based on reasonable estimates of the cost of capital for the GGP, that is, values in the range $407 million to $434 million at 31 December 1999, or lower values at either later valuation dates or taking into account capital recovery by GGT subsequent to 31 December 1999.

219. A second element of the public interest is one of avoiding sovereign risk, as described above in relation to section 8.11 of the Code (paragraph 178 and following). The Authority recognises that the administration of third-party access regulation for the GGP established under the State Agreement has resulted in gas transmission tariffs that are in excess of levels necessary for the recovery of costs. However, the Authority also considers that there is a public interest in not seeking to "undo" past determination of tariffs under the State Agreement as this could potentially create a perception of sovereign risk in dealings with the Government of Western Australia, and adversely affect future business activity and investment. Consideration of the public interest in this respect would coincide with the legitimate business interests of GGT, and the interests of GGT's owners, in retaining the past benefits gained by charging of the tariffs determined under the State Agreement and which remain in place until the commencement of an Access Arrangement. As noted in relation to section 2.24(a) of the Code, the Authority is of the view that the value of the Initial Capital Base that would reflect this interest is $495 million at 31 December 1999 (and corresponding values at later valuation dates as indicated in the table of paragraph 182).

220. Section 2.24(f) of the Code requires that the Authority take into account the interests of Users and Prospective Users.

221. Consistent with one of the elements of the public interest addressed in relation to section 2.24(e) of the Code, consideration of the interests of Users and Prospective Users would cause the Authority to give weight to possible values of the Initial Capital Base that are closer to the values in the range $407 million to $434 million at 31 December 1999, or lower values at either later valuation dates or taking into account capital recovery by GGT subsequent to 31 December 1999.

[48] Epic Decision, ibid, p 551.

222. The Authority has given consideration to the factors of section 2.24(b), (c) and (d) of the Code, but considers these to be of less relevance in relation to the Initial Capital Base of the GGP.

223. Section 2.24(b) of the Code requires that the Authority take into account the firm and binding contractual obligations of the Service Provider or other persons (or both) already using the Covered Pipeline.

224. The Authority does not currently have any information before it that would enable an assessment of whether, if at all, different values of the Initial Capital Base would affect contractual obligations of GGT or Users of the GGP and no submissions were made by either GGT or Users in this respect. The Supreme Court has determined that the State Agreement does not afford any enforceable contractual right to protection from the application of the Code.[49] In these circumstances the Authority has no reason to consider firm and binding contractual obligations in relation to its determination on the proposed Initial Capital Base.

225. Section 2.24(c) of the Code requires that the Authority take into account the operational and technical requirements necessary for the safe and reliable operation of the pipeline.

226. As noted in relation to section 8.1(c) of the Code, the safe and reliable operation of the pipeline may be contingent upon adequate revenue for the Service Provider, which is in turn affected by the approved Reference Tariff and the Initial Capital Base. There is no information before the Authority that would suggest that the ability of GGT to operate the pipeline in a safe and reliable manner would be affected by values of the Initial Capital Base in the range $407 million to $434 million at 31 December 1999, or lower values at either later valuation dates or taking into account capital recovery by GGT subsequent to 31 December 1999.

227. Section 2.24(d) of the Code requires that the Authority take into account the economically efficient operation of the pipeline.

228. The "economically efficient operation of the pipeline" may refer to cost efficiency in operation of the existing asset, as well as incentives to efficiently invest in the asset into the future. This is likely to be affected by the level and structure of a Reference Tariff, but not directly by the value of the Initial Capital Base.

229. Having completed this consideration of the relevant elements of the Code in respect of determination of a value for the Initial Capital Base of the GGP, the Authority is required to consider whether the Initial Capital Base proposed by GGT conforms to the principles of the Code.

230. The value of the Initial Capital Base proposed by GGT is in excess of the range of estimated DAC and DORC values for the pipeline at the same valuation date ($434 million and $407 million, respectively). The Authority acknowledges, however, that estimation of both the DAC and DORC values involves exercise of judgement in assumptions underlying the calculations and hence each may be affected

[49] WMC Decision, ibid.

by a margin of error in estimation. The proposed Initial Capital Base could conceivably lie within the upper limit of a reasonable range of precision in estimation of either the DAC or DORC values, at least at a valuation date of 31 December 1999.

231. The Authority is of the view that there is reason to consider the circumstances of the GGP to be abnormal in the context of section 8.11 of the Code. Under section 8.10(f) of the Code, the Authority has given consideration to the setting of tariffs under the State Agreement for the period prior to the date at which it was originally envisaged that an Access Arrangement under the Code would be in place for the GGP (1 January 2000) and for the period from this date to the date of this Amended Draft Decision. The Authority has determined an asset value based on the calculation of capital recovery consistent with the determination of third-party tariffs prior to 1 January 2000 of $495 million at 31 December 1999. This is above the range of values bound by estimates of DAC and DORC, but the Authority considers that a factor to be given substantial weight, in the balancing of the legitimate business interests of GGT and the interests of Users and the public interest, is a value for the Initial Capital Base that recognises the expectations created by the tariff regime that was administered by the Western Australian Government under the State Agreement.

232. As indicated in relation to section 8.11 of the Code (paragraph 178 and following), the Authority considers there to be a significant public interest in avoiding sovereign risk to investors in infrastructure assets when a new regulatory regime is implemented, especially where decisions to be made under the regulatory regime may have the effect of retrospectively altering benefits received by parties prior to the introduction of the regime. The Authority also recognises the public interest that is represented by giving effect to administrative arrangements that were not challenged by the Western Australian Government when they were proposed by the owners of GGP. The Authority finds that the administration of the State Agreement by the Western Australian Government allowed these tariffs to become entrenched under the Tariff Setting Principles and may have created an expectation in the owners of the GGP that the high rate of return would continue. To seek to “unwind” the past determinations of tariffs would therefore be contrary to the public interest in limiting sovereign risk. This public interest coincides with GGT's reasonable expectations and the legitimate business interests of GGT.

233. In considering possible values of the Initial Capital Base in excess of the DAC value determined at 31 December 1999 or at some later date, the Authority has weighed the interests of Users and Prospective Users and the broader public interest in having prices for gas transmission Services reflect the efficient cost of pipeline assets in a workably competitive market. In this regard, the Authority has determined that the tariffs established under the State Agreement implied a rate of return to GGT that is likely to have been substantially in excess of GGT’s actual cost of capital. Accordingly, the Authority has regard to the very substantial value of capital recovery ($235 million in dollar values at 31 December 1999) that is estimated to have occurred to the date of this Amended Draft Decision, and which will continue to occur until such time as the Access Arrangement commences if GGT maintains the tariffs currently being charged to third parties. However, against these interests, the Authority has again balanced the substantial public interest in avoiding sovereign risk to investors in infrastructure assets that may arise if the Initial Capital Base is valued

in such a manner that there is a "clawing back" of benefits gained by GGT through the legitimate implementation of tariffs under the previous tariff regime.

234. After considering the factors of section 8.10 of the Code and examining GGT’s proposed Initial Capital Base against the objectives of section 8.1, and guided by section 8.11 and the factors of section 2.24, the Authority is of the view that the public interest in avoidance of sovereign risk in the regulation of infrastructure assets should be accorded substantial weight in establishing an Initial Capital Base reflecting past capital recovery by GGT. The Authority considers that the value of the Initial Capital Base originally proposed by GGT of $452.6 million at 31 December 1999 does not give sufficient recognition to this public interest and therefore does not conform to the principles of the Code. Since submission of the proposed Access Arrangement, GGT has provided a further submission in support of a higher Initial Capital Base. After taking into account all of the above matters, the Authority has decided that the value of the Initial Capital Base should be $480 million at 31 December 1999 (including a value of working capital of $1.3 million).

New Facilities Investment

235. Sections 8.15 to 8.21 of the Code provide for capital costs incurred in New Facilities Investment to be included in the Capital Base of a Covered Pipeline, and for capital costs that are forecast for an Access Arrangement Period to be considered in determination of Reference Tariffs for that Access Arrangement Period.

236. Section 8.16 of the Code sets out criteria that must be met by any New Facilities Investment if the actual capital cost of that investment is to be added to the Capital Base. These criteria are:

> (a) Subject to sections 8.16(b) and sections 8.20 to 8.22, the Capital Base may be increased under section 8.15 by the amount of the actual New Facilities Investment in the immediately preceding Access Arrangement Period provided that:
>
> i. that amount does not exceed the amount that would be invested by a prudent Service Provider acting efficiently, in accordance with accepted good industry practice, and to achieve the lowest sustainable cost of providing Services; and
>
> ii. one of the following conditions is satisfied:
>
> A. the Anticipated Incremental Revenue generated by the New Facility exceeds the New Facilities Investment; or
>
> B the Service Provider and/or Users satisfy the Relevant Regulator that the New Facility has system-wide benefits that, in the Relevant Regulator's opinion, justify the approval of a higher Reference Tariff for all Users; or
>
> C. the New Facility is necessary to maintain the safety, integrity or Contracted Capacity of Services.
>
> (b) If pursuant to section 8.20 the Relevant Regulator agrees to Reference Tariffs being determined on the basis of forecast New Facilities Investment, the Capital Base may be increased by the amount of the New Facilities Investment forecast to occur within the new Access Arrangement Period determined in accordance with sections 8.20 and 8.21 and subject to adjustment in accordance with 8.22.

237. Section 8.17 of the Code sets out two factors that the Authority must consider in determining whether Capital Expenditure meets the criteria set out in section 8.16:

(a) whether the New Facility exhibits economies of scale or scope and the increments in which Capacity can be added; and

(b) whether the lowest sustainable cost of delivering Services over a reasonable time frame may require the installation of a New Facility with Capacity sufficient to meet forecast sales of Services over that time frame.

238. Section 8.18 of the Code allows for a Reference Tariff Policy to state that the Service Provider will undertake New Facilities Investment that does not satisfy the requirements of section 8.16, and for the Capital Base to be increased by that part of such investment that does satisfy section 8.16 (the "**Recoverable Portion**"). Section 8.19 of the Code allows for an amount of the balance of the investment to be assigned to a Speculative Investment Fund, and to be added to the Capital Base at some future time if the criteria of section 8.16 are met. Section 8.19 also sets out the manner in which the value of the Speculative Investment Fund is determined at any time.

239. Section 8.20 of the Code provides for Reference Tariffs to be determined on the basis of New Facilities Investment that is forecast to occur within the Access Arrangement Period provided that the investment is reasonably expected to pass the requirements of section 8.16 when the investment is forecast to occur. This does not, however, mean that the forecast New Facilities Investment will automatically be added to the Capital Base after it has occurred (section 8.21). Rather, the Authority will assess whether the investment meets the criteria of section 8.16 of the Code either at the time of review of the Access Arrangement, or at any other time if asked to do so by the Service Provider.

240. Section 8.22 of the Code requires that either the Reference Tariff Policy should describe, or the Authority shall determine, how the New Facilities Investment is to be determined for the purposes of additions to the Capital Base at the commencement of the subsequent Access Arrangement Period. This includes how the Capital Base at the commencement of the next Access Arrangement Period will be adjusted if the actual New Facilities Investment or Recoverable Portion (whichever is relevant) is different from the forecast New Facilities Investment (with this decision to be designed to best meet the objectives in section 8.1).

241. Sections 8.23 to 8.26 of the Code set out provisions for New Facilities Investment to be financed in whole or in part by Capital Contributions from Users, or from surcharges over and above Reference Tariffs to be charged to Users.

242. GGT provided the forecasts of New Facilities Investment in the Access Arrangement Information submitted with the proposed Access Arrangement on 15 December 1999, as indicated below. The proposed New Facilities Investment was indicated to be of a "maintenance" nature, providing for the replacement of miscellaneous capital equipment and enhancement of peripheral and utility systems and equipment.[50]

[50] Access Arrangement Information, section 4.3.

Goldfields Gas Pipeline forecast New Facilities Investment (information provided 15 December 1999, nominal $million)

Year	2000	2001	2002	2003	2004
Forecast Expenditure	1.454	1.173	1.200	1.223	1.247

243. In its submission of 17 December 2002, GGT provided revised information on actual and forecast New Facilities Investment, as follows.[51]

Goldfields Gas Pipeline actual and forecast New Facilities Investment (information provided 17 December 2002, nominal $million)

Year	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2007/08
	Actual Expenditure			Forecast Expenditure				
Actual and Forecast Expenditure	1.634	9.094	1.855	11.100	3.300	1.300	1.200	1.200

244. Pursuant to a request from the Authority, GGT provided further data on actual and forecast New Facilities Investment to 31 December 2009, indicated as follows.

Goldfields Gas Pipeline actual and forecast New Facilities Investment (information provided March 2004, nominal $million)

Calendar Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	Actual Expenditure				Forecast Expenditure					
Actual and Forecast Expenditure	3.64	8.39	1.12	10.21	5.87	1.25	1.31	1.38	1.45	1.52

245. GGT provided to the Authority limited information on the elements of New Facilities Investment, indicating significant expenditure on compressor stations in 2000/2001 and 2003/2004.[52] The forecast of New Facilities Investment itself suggests that forecasts for each of the years 2006 to 2009 were derived by increasing the forecast of the previous year by 5 percent. GGT has not provided the Authority with information to justify actual expenditures or explain the derivation of forecasts.

246. The Authority is of the view that GGT has not provided sufficient information on actual and forecast New Facilities Investment to enable the Authority to form a definitive view as to whether the expenditure would meet the requirements of section 8.16 of the Code. However, notwithstanding the inadequacy of the information provided by GGT, the Authority understands that two compressor stations have been installed on the GGP in accordance with the actual and forecast capital expenditure of 2000 to 2004. The Authority is also mindful that the actual and forecast New Facilities Investment, other than in relation to compressor stations, is of a relatively small value that is not inconsistent with expectations of capital expenditure of a "maintenance" nature for a pipeline such as the GGP. As such, the Authority is of the

[51] GGT Submission, 17 December 2002, Schedule 2.

[52] Indicated values of expenditure on compressor stations are indicated in the Confidential Annexure to this Amended Draft Decision.

view that the actual and forecast Capital Expenditure for the period 2000 to 2009 may reasonably be expected to meet the requirements of section 8.16, and is prepared to allow the New Facilities Investment as proposed to be taken into account in determination of the Reference Tariff for the Access Arrangement Period.

247. The Authority notes that GGT will need to provide further information before the Authority can make a determination allowing the New Facilities Investment to be added to the Capital Base of the GGP at the commencement of the next Access Arrangement Period, as required under sections 8.16 and 8.17 of the Code.

Rate of Return

248. Sections 8.30 and 8.31 of the Code state the principles for establishing the Rate of Return used in determining a Reference Tariff:

> 8.30 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 and the risk involved in delivering the Reference Service (as reflected in the terms and conditions on which the Reference Service is offered and any other risk associated with delivering the Reference Service).
>
> 8.31 By way of example, the Rate of Return may be set on the basis of a weighted average of the return applicable to each source of funds (equity, debt and any other relevant source of funds). Such returns may be determined on the basis of a well accepted financial model, such as the Capital Asset Pricing Model. In general, the weighted average of the return on funds should be calculated by reference to a financing structure that reflects standard industry structures for a going concern and best practice. However, other approaches may be adopted where the Relevant Regulator is satisfied that to do so would be consistent with the objectives contained in section 8.1.

249. For its proposed Access Arrangement of 15 December 1999, GGT used a net present value approach to determining Total Revenue. The Rate of Return used as the discount rate in the net present value calculations was a WACC derived by GGT, as described in section 7.4 of the Access Arrangement Information.

250. The WACC proposed by GGT was a real pre-tax WACC of 12.2 percent. The Capital Asset Pricing Model ("**CAPM**") was used to derive the after-tax WACC, which was then converted to a pre-tax real WACC using the "forward transformation" method. The input variables used by GGT to derive this WACC are set out in the following table.

Parameters Used by GGT to Calculate the WACC (December 1999)

Parameter	Parameter Value
Inflation Rate	2.5%
Debt to Asset Ratio (Gearing)	50%
Debt Margin	2.25%
Nominal Pre-Tax Cost of Debt	8.95%
Nominal Risk Free Rate	6.7%
Australian Market Risk Premium	6.5%
Beta (equity)	1.4
Dividend Imputation Factor: Value of Franking Credits	30%
Company Tax Rate	36%

251. The values of the different forms of the WACC calculation, based on the input variables proposed for the Goldfields Gas Pipeline, are shown in the table below.

Rate of Return Values Calculated From GGT's Assumed CAPM Parameters (December 1999)

	Nominal	Real
Post-Tax (Officer) WACC	9.6%	7.0%
Pre-Tax WACC (Forward Transformation)	15.0%	12.2%
Post-Tax Return on Equity	15.8%	13.0%
Pre-Tax Return on Equity	21.1%	18.2%

252. In its submission of 17 December 2002, GGT proposes a different Rate of Return for the determination of Total Revenue. In this submission, GGT proposes that the assumed cost of equity for the GGP not be estimated using the CAPM. Rather, GGT contends that a nominal post-tax return on equity of 17.45 percent assumed in the initial determination of third-party tariffs was a "fundamental element of the original arrangement with the State" and to alter the return on equity would be contrary to the legitimate business interests of the GGP owners.

253. In the submission of 17 December 2002, GGT also (implicitly) proposes a nominal return on debt of 7.475 percent, being the sum of an assumed risk-free rate of 5.9 percent and debt margin of 1.575 percent, and a nominal pre-tax WACC of 16.2 percent based on other assumptions as follows.

Proposed CAPM parameter values for estimation of the rate of return for the period 2000 to 2004 (December 2002)

Parameter	Value used by GGT
Risk free rate (nominal)	5.90%
Cost of debt margin	1.575%
Corporate tax rate	30%
Franking credit value	0%
Debt to total assets ratio	50%
Equity to total assets ratio	50%
Expected inflation	2.5%

254. As an initial matter in relation to the proposed Rate of Return, the Authority has given consideration to whether it is possible under the Code to consider GGT's contentions in respect of the Rate of Return, as set out in GGT's submission of 17 December 2002.

255. Guidance from the Code in determination of the Rate of Return is summarised as follows.

256. Sections 8.30 and 8.31 of the Code (reproduced in paragraph 248, above) establish the principles for determination of the Rate of Return.

257. Section 8.30 of the Code is taken by the Authority to require that the implied return factored into the assessment of the price controls for a pipeline owner's regulated activities reflects the opportunity cost of capital associated with those activities, that is, the returns that the pipeline owner would have to make to providers of debt and equity funds to motivate the provision of these funds. Section 8.31 provides additional guidance on how to estimate the cost of capital associated with the pipeline owner's regulated activities. It specifically allows for returns to be determined on the basis of a well-accepted financial model, such as the CAPM. It also encourages the use of a benchmark assumption is respect of the financing structure.

258. Other relevant guidance for the Rate of Return is provided in section 8.2(e) of the Code. The "return which is commensurate with prevailing conditions in the market for funds and the risk involved in delivering the Reference Service"[53] is a parameter that cannot be observed, but can only be estimated and forecast for the regulatory period. While there is a degree of statistical uncertainty associated with the estimation and forecasting of the cost of capital associated with an activity, it is necessary to identify a unique, single, or "true" cost of capital associated with that activity at any particular point in time in order to derive a Total Revenue that can be used to consider whether the proposed Reference Tariff complies with the Code. Further, introducing a range at each point of the calculation indicated by the Code would produce a meaningless process by which to evaluate the proposed Reference

[53] Section 8.30 of the Code.

Tariff. Accordingly, section 8.2(e) of the Code requires the Rate of Return to reflect the *best* estimate of the true cost of capital.

259. The Code therefore requires that the Rate of Return be the best estimate of the cost of capital for the GGP business, forecast for the Access Arrangement Period. The Rate of Return used in historical determinations of third-party tariffs under the State Agreement (as submitted by GGT) could only be relevant for the purposes of the Code if those historical determinations provide useful evidence in calculating the forward-looking cost of capital for the Access Arrangement Period. Rates of Return implied by third-party tariffs determined under the State Agreement are relevant in assessing the Rate of Return for determination of the Reference Tariff to the limited extent that they provide some evidence of the cost of capital associated with the project over the Access Arrangement Period. However, the task for the Authority is not to determine whether to continue Rates of Return that have been used in the past. Rather, the task is to determine whether the proposed Rate of Return conforms to the Code.

260. The general approach taken by GGT in its proposed Access Arrangement of December 1999 in application of the CAPM to determine a rate of return is consistent with the approach most commonly used by Service Providers and Regulators under the Code in Australia. This general approach has been to use the CAPM to derive a target post-tax WACC, and then make adjustments for the net cost of taxation to derive a pre-tax WACC.

261. The CAPM is used to estimate the required nominal post-tax return to the equity share of an asset, with the most common formulation of the CAPM for this purpose being:

$$R_e = R_f + \beta_e (R_m - R_f)$$

where R_f is the risk-free rate, $(R_m - R_f)$ is the expected risk premium above the risk-free rate for a well-diversified portfolio of equities (R_m), β_e is the measure of the particular equity's relative risk, or its equity beta, and R_e is the required return on that equity.

262. The outcome of this model is an estimate of the required post-tax return to equity. The return required by the other source of financing – debt – can be observed directly from the market for debt finance, and the average of these sources of financing (weighted by the respective shares of debt and equity in the financing of the asset) provides an estimate of the WACC for the asset. That is:

$$WACC = R_e \frac{E}{V} + R_d \frac{D}{V}$$

where $\frac{E}{V}$ and $\frac{D}{V}$ are equity and debt as shares of total assets, V, and R_d is the cost of debt.

263. There are a number of different versions of the post-tax WACC that are derived by transferring one or more of the particular costs or benefits from the cash flows to inclusion in the WACC formula. One popular form is the "Officer" nominal post-tax

WACC, which takes account of corporate income tax and the value of franking credits and has the following formula:

$$WACC = R_e \cdot \frac{E}{V} \cdot \frac{1-t_c}{(1-t_c(1-\gamma))} + R_d \cdot \frac{D}{V} \cdot (1-t_c)$$

where t_c is the corporate tax rate and γ is the value of franking credits created (as a proportion of their face value).

264. The Authority has used the Officer WACC formula to estimate the cost of capital for the GGP. The various elements of the CAPM model, the position taken on each by GGT and the views of the Authority on each element are described below.

Risk Free Rate and Inflation Rate

265. In its proposed Access Arrangement of 15 December 1999, GGT proposed using the 10-year Commonwealth Government Treasury bond rate on 3 November 1999 (6.7 percent) as a measure of the nominal risk-free rate. GGT also proposed using a forecast of inflation equal to the Reserve Bank's official forecast at the time of 2.5 percent, and used this inflation forecast to estimate a real risk-free rate of 4.1 percent.

266. In its submission of 17 December 2002, GGT used a different methodology for estimating the risk-free rate and inflation rate, indicating that values for these parameters should be determined on the basis of long-term averages rather than point estimates or averages over short periods. GGT used a value for the nominal risk-free rate of 5.9 percent, representing the average rate for 10 year Commonwealth Government Treasury bonds over the five years ending September 2002.

267. Regulatory decisions under the Code in Western Australia and elsewhere in Australia have typically estimated the nominal risk-free rate by calculating the average yield to maturity on 10 year Commonwealth Government Treasury bonds over 20 consecutive trading days. Similarly, the real risk-free rate has been estimated by calculating the average yield to maturity on 10 year Commonwealth Government Indexed Treasury Bonds over the same 20 consecutive trading days. A forecast of inflation over the period has been calculated from the two rates, using the Fischer equation.[54]

268. GGT's December 1999 proposal for determination of the risk-free rate comprised a single-day value of the Commonwealth Government Treasury bond rate. The Authority considers that a single day value is subject to effects of day-to-day volatility in the bond market, and for this reason an average of the bond rate over a number of consecutive trading days is preferred as an estimate of the risk-free rate.

269. GGT's submission of 17 December 2002 in respect of the risk-free rate (using an historical average risk-free rate observed from trading of government bonds) represents a fundamental misunderstanding of the use of observed returns on government bonds as an estimate of the risk-free rate. The observed returns on

[54] Brealey, R.A. and Myers, S.C., 1996. *Principles of Corporate Finance* 5th ed., New York: McGraw–Hill, pp 642, 643.

government bonds are calculated from the dollar value of the return on the bond at its maturity, and the current market value of the bond. The current market value of the bonds reflects the "market view" of the interest rates into the future (at least over the term of the government bonds) and not, as GGT's submission would suggest, a risk-free rate at the present point in time. Market estimates of the risk-free rate have the advantage of being forward-looking rather than historical, and as a consequence they are considered to provide a better estimate of the future risk-free rate than an "actual" historical value or average of historical values. Indeed, to the extent that historical risk-free rates of return provide a guide to future risk-free returns, it would be expected that this information would be factored into the forward-looking view of risk-free returns along with other factors envisaged to affect future returns.

270. For this reason, GGT's contention in its December 2002 submission that an historical average risk-free rate should be used to forecast the future risk-free rate is without justification.

271. Taking the above considerations into account, the Authority is of the view that neither of the methodologies proposed by GGT for determination of the risk-free rate is consistent with the requirements of the Code for determining the best estimate of the cost of capital. Rather, the Authority takes the view that the best estimate of the risk-free rate is derived by taking an average of bond rates over a number of consecutive trading days and, in the absence of any submission to the contrary, is of the view that an average over 20 consecutive trading days is appropriate. For the 20 trading days to 30 June 2004, the averages of observed rates of return on 10 year government bonds indicate a nominal risk-free rate of 5.89 percent, a real risk-free rate of 3.20 percent and an implied future inflation rate of 2.61 percent.

Market Risk Premium

272. In its proposed Access Arrangement of 15 December 1999, GGT proposed a market risk premium of 6.5 percent. In a submission on the April 2001 Draft Decision, GGT disputed the Regulator's assumption of a market risk premium of 6 percent, citing references to support a higher value of closer to 8 percent. GGT also submitted that the appropriate value for the market risk premium depends upon the value attributed to franking credits:[55]

> GGT believes that the MRP's currently being observed in the marketplace reflect the capitalisation of the value of franking credits and not a reduction in the cost of equity capital. As a result, the Regulator's current methodology for calculating pre-tax WACC which uses a *(sic)* both a low value for the MRP, 6%, and a high value for franking credit utilization, 50%, is double counting the benefits of dividend imputation.
>
> GGT believes the values for MRP and the franking utilisation factor are inter-related. If the Regulator chooses to adjust the pre-tax return downward to reflect the impact of imputation tax credits, then he should select a high value for the MRP, i.e. 7% to 8%. If the Regulator chooses a low value for the MRP, i.e. 6% to 7%, then he should choose a low value for franking credit utilization, i.e. zero.
>
> The MRP is an important variable in determining the applicable rate of return. It is demonstrably volatile. Therefore, discretion must be exercised when assigning it a value. GGT respectfully requests that the Regulator properly recognises the legitimate business interests of the Service

[55] GGT Submission, 13 July 2001, p32.

Provider, and also particularly recognises the conditions in the market for funds as required by the Code.

273. GGT's proposed value for the market risk premium of 6.5 percent is inconsistent with all past regulatory decisions under the Code that have approved Access Arrangements and associated Reference Tariffs determined on the basis of a market risk premium of 6.0 percent or less.

274. In considering the proposals and submissions of GGT, the Authority has taken into account available evidence on the value of the market risk premium into the future, with particular reference to a detailed consideration of the market risk premium by the Essential Services Commission of Victoria.[56] This evidence comprises historical measurements of the market risk premium and surveys of expectations of financial practitioners, participants in financial markets and investors.

275. The table below summarises the Australian historical data on the realised historical market risk premium.

Historical Realised Market Risk Premium in Australia[57]

Time Period of Estimation	Equity Premium Returns	Standard Deviation	Standard Error of the Mean
1882-2001	7.19%	16.97%	1.55%
Differing End Point			
1882-1950	8.00%	11.11%	1.34%
1882-1970	8.16%	13.70%	1.45%
1882-1990	7.40%	17.33%	1.66%
Different Beginning Point			
1900-2001	7.14%	17.94%	1.78%
1950-2001	6.51%	22.60%	3.13%
1970-2001	3.37%	24.38%	4.31%

276. The Authority notes that the ability to draw conclusions from this historical evidence is limited by large standard errors of the estimates. The average market risk premium for the period 1882 to 2001 is 7.2 percent with a standard error of 1.55 percent, implying a 95 percent confidence interval of between 4.3 percent and 10.4 percent. Nevertheless, there is some suggestion from the historical data that more recent estimates of the realised MRP are lower than the measurements for earlier periods, suggesting a decline in values over the period since 1882.

277. The Authority also notes that in addition to large standard errors of estimates, there are other difficulties inherent in inferring the appropriate forward-looking market risk from historical data of stock market returns. At different times the stock market may

[56] Essential Services Commission, Victoria, 2002, Review of Gas Access Arrangements: Final Decision, pp 322 – 336.

[57] Essential Services Commission, Victoria, 2002, Review of Gas Access Arrangements: Final Decision, p324, citing unpublished data of Professor Robert Officer and Officer, R., 'Rates of Return to shares, bond yields and inflation rates: An historical perspective', in Share Markets and Portfolio Theory; Readings and Australian Evidence, 2nd edition, University of Queensland Press, 1992.

be a better or worse proxy for the returns generally available in an economy. Also, the size of the market risk premium is dependent on the absolute level of risk represented by the stock market proxy, which will be determined in large measure by the industrial structure of the stock market's composition. One hundred years ago the Australian stock market was dominated by resources stocks and of a very different composition than in more recent decades, and there is no reason to consider that the market risk premium has remained constant over that period, or will do so into the future.

278. In view of the difficulties in using historical data to predict a market risk premium for the future, the Authority has taken into account the views of financial practitioners and the market participants, including institutional investors, as to the market risk premium to be factored into investment decisions. In this regard, the Authority has taken into account a Jardine Capital Partners survey of views on the market risk premium that indicates an average of market participants' views on the historical MRP of 5.87 percent, and expectations about the future MRP about 1 percentage point below this level.[58]

279. Taking this information into account, the Authority is of the view that a value of 6.0 percent, consistent with past regulatory practice in Australia and contrary to the value of 6.5 percent proposed by GGT, is the best estimate of the market risk premium.

Equity Beta

280. The application of the CAPM requires an equity beta, β_e, to be determined for the GGP business. The equity beta value for a business reflects that business's exposure to systematic risk, which relates to that portion of the variance in the return on an asset that arises from market-wide economic factors that affect returns on all assets, and which cannot be avoided by diversifying a portfolio of assets.

281. For a business entity not listed on the stock market, an equity beta is commonly estimated by estimating asset beta and debt beta values from observations of comparable listed entities and re-levering these into an equity beta that is consistent with the assumed capital structure of the entity being examined.

282. For its proposed Access Arrangement of 15 December 1999, GGP determined the Rate of Return on the basis of an equity beta value of 1.4, with an assumed gearing (debt to asset ratio) of 50 percent. GGT's reasoning for this assumed value of the equity beta is examined as follows.

283. Firstly, GGT has submitted that if empirical evidence is to be used to determine the appropriate value of the equity beta, then the appropriate evidence is the observed beta values of the customers of the pipeline (mining companies) rather than observed beta values of other gas pipeline companies, reflecting a pre-supposed more "risky" demand for pipeline Services for the GGP than for a more typical gas transmission pipeline that serves industrial and urban gas consumers.

[58] Jardine Fleming Capital Partners Limited, (September, 2001) *The Equity Risk Premium – An Australian Perspective*, Trinity Best Practice Committee.

284. GGT has not presented any evidence to suggest that a relatively high volatility in returns for mining companies is reflected in the demand for energy and thus the revenues and profits of a gas transmission pipeline servicing the mining companies, although differences of view have been expressed on this issue over the history of tariff setting for the GGP.[59]

285. Secondly, in a submission made subsequent to the April 2001 Draft Decision, GGT claimed that it is entitled to a return that reflects the unique risk of the GGP business as well as market risk:[60]

> The Regulator has made a serious error in not taking into account the issue at hand - the risk of the GGP as a stand-alone entity. The issue at hand is the risk faced by a particular pipeline and the commensurate requirement for return on investment from that same particular pipeline.
>
> The risk of a portfolio containing a variety of equities (some more risky, some less risky) is simply irrelevant.

286. The view that the Rate of Return estimated for the GGP should take into account the unique risk of the GGP business is contrary to the core assumptions of the CAPM model, which provides only for non-specific or non-diversifiable risk to be taken into account. The historical use of the CAPM for estimating a rate of return for the GGP would suggest that the financial advisers to GGT and the owners of the GGT recognised that unique risks of the GGP business should not be taken into account in determining the Rate of Return for the purposes of calculating regulated tariffs.

287. In summary, the Authority is of the view that GGT has not established either that the beta values of Users of the GGP provide a better basis for estimating a beta value for the GGP business than the beta values of other gas transmission businesses, nor that there is some basis either in principle or by virtue of precedent for taking into account unique risks of the GGP business in determining the Rate of Return. Establishing the former would require that a relationship be established between the volatility of returns to the pipeline Users and the demand for pipeline Services. This has not been done. In regard to the unique risks of the GGP business, if this were to be taken into account it would need to be by a methodology other than the CAPM. GGT has not proposed any such methodology.

288. The Authority is therefore of the view that there is no justification for determining a beta value for the GGP other than on the basis of observed values from other comparable pipeline companies.

289. A study in 2002 of empirical estimates for comparable domestic Australian gas and electricity transmission and distribution companies (and from US, UK and Canadian companies) indicated asset beta values in the order of 0.3 to 0.35 for the Australian companies, suggesting equity beta values of 0.65 to 0.70 (re-levered for a gearing ratio of 60 percent).[61] With negative betas excluded, the re-levered (to 60 percent

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[59] Differences of view are evident in past studies relating to tariffs established for the GGP under the State Agreement. These studies and the views expressed are indicated in the Confidential Annexure to this Amended Draft Decision.

[60] GGT Submission, 13 July 2001, p34, emphasis in original.

[61] The Allen Consulting Group (July 2002), *Empirical Evidence on Proxy Beta Values for Regulated Gas Transmission Activities*, report to the Australian Competition and Consumer Commission.

gearing) equity betas for Australian, US, UK and Canadian companies were 0.66, 0.20, 0.18 and 0.26 respectively. The study concluded that for regulatory purposes, based on the evidence, a downward revision of equity beta to 0.70 (rounded up from 0.66) could be applied. However, caution was recommended in doing so on the basis that the quality of empirical evidence necessary for such a downward revision from the values currently used by regulators did not exist at the time of the study.

290. Updating of these empirical estimates of beta values for Australian companies to June 2003 indicates lower asset beta values in the order of 0.1 to 0.25, corresponding to equity beta values in the order of 0.2 to 0.35 (still re-levered to a consistent assumption of 60 percent gearing).[62]

291. Notwithstanding the cautionary conclusion of this empirical study of beta values, it would appear that market practitioners are more inclined to accept current market evidence even if this diverges from previous levels. An example is provided by a recent Expert's Report on United Energy furnished by Deloitte Touche Tohmatsu based on Bloomberg evidence and industry experience: in May 2003 Deloitte concluded that for valuation purposes an appropriate asset beta for United Energy is 0.35 to 0.40, resulting in a levered equity beta estimate at a gearing level of 45 percent of 0.55 to 0.63.[63] This corresponds to a levered equity beta estimate of 0.7 to 0.8 at a gearing level of 60 percent.

292. The Authority recognises that available empirical evidence suggests an equity beta for the GGP in the order of 0.7 or less (for an assumed gearing of 60 percent debt to assets[64]), but is also mindful of the cautionary approach adopted recently by other Australian regulators in recognising a relative paucity of empirical data on equity beta values for Australian gas pipeline companies and adopting equity beta values (assumed gearing of 60 percent debt to assets) of 1.0.[65]

293. The Authority holds a view that the major Western Australian gas transmission pipelines may be exposed to a greater level of systematic risk than transmission pipelines and distribution systems of the eastern states of Australia. In this regard, the Authority recognises that the gas transmission markets for the major transmission pipelines in Western Australia are predominantly markets for supply of gas to mining and mineral processing activities.

294. Taking into account the empirical evidence on beta values for gas transmission and distribution companies, the positions taken by other Australian regulators in the face of this empirical evidence, and the view of the Authority in relation to the exposure of the GGP to systematic risk relative to pipeline systems of the eastern states, the

[62] Essential Services Commission of South Australia, January 2004, *Electricity Distribution Price Review: Return on Assets, Preliminary Views*. (The updated estimates of equity beta values provided in this report were calculated by The Allen Consulting Group using the same methodology as for the July 2002 report cited above.)

[63] Deloitte Touche Tohmatsu (2003), *United Energy Limited – Independent Expert's Report in Relation to Proposed Scheme of Arrangement*.

[64] Refer to the discussion of gearing in paragraph 310 and following of this Amended Draft Decision.

[65] Essential Services Commission, Victoria, October 2002, Review of Gas Access Arrangements: Final Decision. Australian Competition and Consumer Commission, 13 November 2002, Final Decision: GasNet Australia Access Arrangement Revisions for the Principal Transmission System.

Authority takes the view that it is appropriate to assume an asset beta value for the GGP of 0.65, corresponding to an equity beta value of 1.33 (rounded to two decimal places) for an assumed gearing of 60 percent, debt to assets.

Nominal Post-Tax Return on Equity

295. Using the above estimates considered by the Authority to be appropriate for the equity beta (1.33), nominal risk-free rate (5.89 percent) and market risk premium (6.0 percent), the Authority has calculated the nominal post-tax return on equity that is consistent with the Code as being 13.84 percent.

Cost of Debt

296. For its proposed Access Arrangement of 15 December 1999, GGT proposed determination of the cost of debt by addition of a "debt risk margin" to the risk-free rate. GGT maintained this approach, but with different parameter values, in consideration of the Rate of Return in its submission of 17 December 2002.

297. GGT proposed a debt risk margin of 2.25 percent comprising:

- 25 basis points for the typical margin between the Commonwealth Government Treasury bond rate and a "bank rate" against which credit margins would be levied;

- 150 to 200 basis points for the credit margin on debt funding for the pipeline, given the risks involved; and

- 25 basis points for a "swap costs" margin.

298. GGT indicated that an assumed debt risk margin of 200 to 250 basis points is supported by empirical evidence, but did not present or cite this evidence.

299. In its submission of 17 December 2002, GGT presented an assumption of a debt margin of 157.5 basis points, and indicated this to be supported by empirical evidence, although again the evidence referred to was not presented or cited.

300. In view of the absence of supporting information for GGT's assumptions as to debt risk margins, the Authority has considered other evidence for the debt risk margin that may apply to a business such as the GGP.

301. An assumption of a debt risk margin in the vicinity of 157.5 basis points appears to the Authority to have been sustainable at the date of GGT's submission in December 2002. At about this time, the Victorian Essential Services Commission indicated a benchmark margin inclusive of bank fees of 168 basis points for the Victorian distribution systems. This determination was based on the average CBA Spectrum yield for 10 year bonds with a BBB+ credit rating over the same period in which the risk-free rate was derived at 7.29 per cent, which implied a margin over the yield on Commonwealth Government securities of equivalent term of 163 basis points, and a

5 basis point allowance for bank costs. The value of 1.68 percent was rounded to 1.7 percent for the purposes of deriving a debt margin.[66]

302. For the purposes of this Amended Draft Decision, the Authority has examined more recent CBA Spectrum data. In this regard, the Authority has assumed the appropriate benchmark for examining costs of debt for the GGP is a regulated energy utility with 60 percent gearing and a credit rating of BBB+, consistent with the Standard & Poors standard ratios for transmission and distribution companies.[67,68]

303. Since the third quarter of 2002, when a number of regulatory decisions allowed debt margins of 1.5 percent to 1.6 percent, the CBA Spectrum indicator rate for this benchmark has reduced considerably. At the end of April 2004, the CBA Spectrum indicator rate for a BBB+ rated bond was in the order of 105 basis points.

304. The Authority recognises, however, that this indicator of the debt margin should be treated with caution. Rates provided by the CBA Spectrum service are not actual market observations, but rather a prediction of yields based on an econometric model, and the market observations upon which the predictions are based are very thin. Currently, only three corporate bonds in the CBA Spectrum database are rated BBB+ and only one of these has a term in excess of 4 years.

305. The Authority has therefore also considered observations in the domestic market for debt bonds, with particular attention to regulated utilities that match their debt exposure to the length of the regulatory cycle.

- On 31 July 2003, GasNet announced a $150 million, 5 year Medium Term Note (“**MTN**”) issue timed for refinancing after the next ACCC regulatory determination in December 2007.[69] It was issued at an interest rate of 6.25 percent. Since the market differential between a 5 and 10 year tenor has recently averaged around 30 to 40 basis points, this implies that a 10 year note could potentially have been issued at an interest rate of around 6.65 percent.

- In September 2003 the Australian Pipeline Trust completed an issue of US and Australian bonds at an average tenor of 11 years at an “all in” cost of BBSW + 94 basis points.

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[66] Essential Services Commission, Victoria, October 2002, Review of Gas Access Arrangements: Final Decision.

[67] As cited in the letter from Nick Wade, Director, Credit Research, UBS Warburg to Jim Lamborn, Treasurer, SPI PowerNet, 28 November 2001, and contained in Appendix F of SPI PowerNet’s Revenue Cap Application submitted to the ACCC, 11 April 2002. Standard & Poors indicate that gearing of 55 percent and an interest cover ratio of 3.25 is consistent with an “A” rating, and gearing of 65 percent an interest cover ratio of 2.0 is consistent with a “BBB” rating. A “BBB+” rating for a benchmark gearing assumption of 60 percent is derived by interpolation.

[68] The Authority has considered the findings of the Australian Competition Tribunal in the EAPL Decision in respect of the assumptions made by the ACCC for an assumed credit rating for the Moomba to Sydney Pipeline. The Authority considers that the findings of the Tribunal are specific to the reasoning expressed by the ACCC in its respective decisions and are not determinative of an appropriate assumption in respect of a credit rating for the GGP.

[69] GasNet Australia, 31 July 2003, Press Release: *GasNet closes early A$150 million medium term note issue due August 2008.*

- The only long term (9 year) BBB+ rated bond traded in Australia is Snowy Hydro's 6.5 percent coupon MTN, which at 3 May 2004 was trading at BBSW + 89. This represents a margin of around 75 basis points over current bond rates.

306. Taking into account the above evidence, the Authority considers that a reasonable estimate of a debt margin for the GGP business may be between 40 and 105 basis points.

307. In addition, the Authority considers that an allowance for debt issuance costs is justifiable. A recent regulatory decision by the ACCC with respect to GasNet approved a debt issuance allowance of 12.5 basis points[70] and the Authority considers a similar allowance for the GGP to be reasonable.

308. Taking a debt margin of 105 basis points and adding a margin for debt issuance costs of 12.5 basis points, an estimate of the cost of a new debt issue for the GGP business would be 117.5 basis points. Rounding up results in an estimate of the debt risk margin of 120 basis points. The Authority takes the view that this estimate is appropriate for the GGP business.

309. Using the above estimates of the nominal risk-free rate of 5.89 percent and the debt risk margin of 1.2 percent, the nominal pre-tax return on debt is estimated at 7.09 percent.

Gearing

310. An assumption about the proportions of equity and debt in the financing structure of the GGP business is necessary to determine a WACC from estimates of the costs of equity and debt.

311. For the proposed Access Arrangement of 15 December 1999 and in its submission of 17 December 2002, GGT assumed a gearing for the GGP business of 50 percent debt to assets. In its submission of 17 December 2002, GGT contends that this assumption as to gearing was a fundamental element of the original arrangement with the State of Western Australia (in the initial setting of third-party tariffs) and this should not be altered.

312. GGT's contention that an assumed gearing of 50 percent was an immutable element of the arrangement with the State in respect of third-party tariffs is not supported by any information available to the Authority and relating to the initial determination of tariffs. Moreover, for the reasons expressed in paragraphs 254 to 259, the Authority does not consider any precedent on the Rate of Return under the State Agreement to be necessarily relevant to determination of the Rate of Return under the Code.

313. In Australia, regulators under the Code have generally approved Access Arrangements with Reference Tariffs determined using an assumption of gearing of 60 percent debt to assets. This assumption has been supported by studies undertaken

[70] Australian Competition and Consumer Commission, 13 November 2002, Final Decision: GasNet Australia Access Arrangement Revisions for the Principal Transmission System.

in 2002 by the Victorian Essential Services Commission in relation to assessment of revisions to Access Arrangements for the Victorian Distribution Systems.[71] More recent data for listed Australian companies with ownership of regulated gas pipelines has been obtained from Bloomberg Financial Services and is presented in the table below.

Australian Gas Pipeline Companies: Total Debt/Enterprise Value

Company	Financial Year				
	2000	2001	2002	2003	May 2004
AGL	36.0%	46.0%	38.7%	28.5%	
Alinta		39.1%	33.8%		22.1%
APT		55.0%	57.6%	51.8%	53.7%
Envestra	84.4%	81.6%	78.0%	72.8%	72.6%
GasNet		73.1%	71.1%		66.7%

314. However, it is notable that the companies that are closer to “pure play” regulated pipeline businesses (Australian Pipeline Trust, GasNet and Envestra) have higher gearing levels than those companies with a broad mix of regulated and unregulated activities (AGL and Alinta). For these latter companies, it is reasonable to expect the gearing relating to regulated activities to be higher than observed for the whole company. Based on this evidence, a 60 percent level of regulatory gearing is considered a reasonable level to adopt in the case of a regulated pipeline business such as the GGP.

Taxation

315. Regulatory practice under the Code to date has typically been to determine Total Revenue on a pre-tax basis, including a pre-tax Rate of Return on the Capital Base. Derivation of a pre-tax Rate of Return requires conversion of the post-tax WACC to a pre-tax WACC.

316. There are two relevant taxation issues: the method that is used to estimate company taxation liabilities associated with the regulated activities, and the value of imputation or franking credits.

317. Taking first the method that is used to estimate company taxation liabilities, for the majority of Access Arrangements approved to date, a simple transformation of a nominal post-tax WACC to a real pre-tax WACC has been used, based on one or both of the following transformation methods:

- forward transformation, involving division of the post-tax nominal WACC by 1 - *T*, where *T* is the statutory taxation rate, and then deducting inflation (using the Fisher transformation[72]) to derive the pre-tax real WACC; and

[71] Essential Services Commission, October 2002, Review of Gas Access Arrangements, Final Decision, Appendix C.

[72] $Real\ WACC = \frac{1 + nominal\ WACC}{1 + i} - 1$, where *i* is the inflation rate.

- reverse transformation, involving first deducting inflation from the post-tax nominal WACC, and then grossing up the real post-tax WACC by one minus the statutory taxation rate.

318. More recently, the forward transformation has generally been used, reflecting a view that changes to the company taxation regime in Australia, implemented as of 1 July 2000, are likely to narrow the gap between the statutory and effective tax rates for infrastructure firms in Australia.

319. For the proposed Access Arrangement and its 17 December 2002 submission, GGT utilised the forward transformation methodology to derive a pre-tax WACC, assuming a corporate tax rate of 36 percent for the former and 30 percent for the latter.

320. The Authority concurs with the use of the forward transformation, but considers that the assumed rate of corporate income tax should be determined as an average rate for the proposed Access Arrangement period, taking into account changes in the company tax rate from 36 to 34 percent from 1 July 2000, and to 30 percent from 1 July 2001. For the purposes of this Amended Draft Decision, the Authority has contemplated a six-year Access Arrangement Period of 1 January 2000 to 31 December 2005, but has also indicated a Reference Tariff for a ten-year Access Arrangement Period of 1 January 2000 to 31 December 2009.[73] The average rates of corporate income tax for these periods (assuming a constant forecast rate of 30 percent) are 31.2 percent and 30.7 percent, respectively.

321. The second issue in relation to taxation is the assumption that is made about the value ascribed to imputation or franking credits, which may reduce the effective rate of tax on returns to equity.

322. Franking credits, or imputation credits, are an allowance under the Australian taxation system that permit taxation liabilities of shareholders to be offset by the value of company tax already paid on profits from which the dividend payments are made. The approach for reflecting the value of franking credits that has emerged as standard practice is to use a market (equity) risk premium that assumes that Australia has a classical tax system (i.e. no franking credits), then to adjust the WACC or cash-flows directly to reflect the non-cash benefits associated with franking credits. The mechanism used to achieve this – the "γ" term in the Officer WACC formula presented in paragraph 263 – can be interpreted as the value of each franking credit that is created by the firm, as a proportion of the face value of that franking credit. A low gamma implies that shareholders do not obtain much relief from corporate taxation through imputation and therefore require a higher pre-tax rate of return to earn the same effective return on investment, and vice versa.

323. For the proposed Access Arrangement of December 1999 and in its submission of 17 December 2002, GGT has proposed that no value be ascribed to franking credits for the purposes of determining the Rate of Return, i.e. $\gamma = 0$. In its submission of December 2002, GGT contends that the assumed zero value of franking credits was a fundamental element of the original arrangement with the State of Western Australia (in the initial setting of third-party tariffs) and this should not be altered.

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[73] The term of the Access Arrangement Period is discussed in detail at paragraph 676 and following.

324. GGT's contention that an assumed zero value of franking credits was an immutable element of the arrangement with the State in respect of third-party tariffs is not supported by any information available to the Authority and relating to the initial determination of tariffs. Moreover, for the reasons expressed in paragraphs 254 to 259, the Authority does not consider any precedent on the Rate of Return under the State Agreement to be necessarily relevant to determination of the Rate of Return under the Code.

325. In Australia, regulators under the Code have generally adopted a γ value of 50 percent, based on the 1999 study by Hathaway and Officer, which estimates gamma at close to 0.50.[74] The Authority takes the view that this assumption is appropriate for the GGP.

WACC Estimate

326. For the reasons set out above, the Authority does not consider that the Rate of Return proposed by GGT for the GGP meets the requirements of the Code as a best estimate of the cost of capital for the GGP over the Access Arrangement Period. A comparison of the parameter values used in calculation of the Rate of Return that were proposed by GGT and those considered appropriate by the Authority are set out in the table below.

Proposed and revised CAPM parameter values for estimation of the rate of return

Parameter	Value proposed by GGT (December 1999)	Value submitted by GGT (December 2002)	Value considered appropriate by the Authority
Risk free rate (nominal)	6.7%	5.90%	5.89%
Market risk premium	6.5%	n.a.	6.0%
Equity beta	1.4	n.a.	1.33
Cost of debt margin	2.25%	1.575%	1.2%
Corporate tax rate	36%	30%	31.2%, 30.7%*
Franking credit value	0%	0%	50%
Debt to total assets ratio	50%	50%	60%
Equity to total assets ratio	50%	50%	40%
Expected inflation	2.5%	2.5%	2.61%

* Average taxation rates for the six year period 2000 – 2005 and the ten year period 2000 – 2009, respectively

327. The returns to equity considered by the Authority to be consistent with the Code are as follows.

[74] Hathaway N. and R.R. Officer (1999), *The Value of Imputation Tax Credits*, Unpublished Manuscript, Graduate School of Management, University of Melbourne.

Returns on equity derived from recommended CAPM parameter values

Returns on Equity	Nominal	Real
Post-Tax	13.84%	10.95%
Pre-tax	16.39%, 16.35%*	13.44%, 13.39%*

* Values for the six year period 2000 – 2005 and the ten year period 2000 – 2009, respectively

328. The WACC values determined by the Authority to be consistent with the Code are as follows.

Revised WACC

Estimated WACC	Nominal	Real
Post-Tax (Officer)	7.44%, 7.48%*	4.71%, 4.75%*
Pre-tax (forward transformation of Officer WACC)	10.81%, 10.79%*	8.00%, 7.98%*

* Values for the six year period 2000 – 2005 and the ten year period 2000 – 2009, respectively

Depreciation

329. Sections 8.32 to 8.35 of the Code relate to depreciation of assets that form part of the Capital Base, for the purposes of determining a Reference Tariff.

330. Section 8.32 defines a Depreciation Schedule as:

> the set of depreciation schedules (one of which may correspond to each asset or group of assets that form part of the Covered Pipeline) that is the basis upon which the assets that form part of the Capital Base are to be depreciated for the purposes of determining a Reference Tariff.

331. Section 8.33 requires that the Depreciation Schedule be designed:

> (a) so as to result in the Reference Tariff changing over time in a manner that is consistent with the efficient growth of the market for the Services (and which may involve a substantial portion of the depreciation taking place in future periods, particularly where the calculation of the Reference Tariffs has assumed significant market growth and the Pipeline has been sized accordingly);
>
> (b) so that each asset or group of assets that form part of the Capital Base is depreciated over the economic life of that asset or group of assets;
>
> (c) so that, to the maximum extent that is reasonable, the depreciation schedule for each asset or group of assets that form part of the Capital Base is adjusted over the life of that asset or group of assets to reflect changes in the expected economic life of that asset or group of assets; and
>
> (d) subject to section 8.27, so that an asset is depreciated only once (that is, so that the sum of the Depreciation that is attributable to any asset or group of assets over the life of those assets is equivalent to the value of that asset or group of assets at the time at which the value of that asset or group of assets was first included in the Capital Base, subject to such adjustment for inflation (if any) as is appropriate given the approach to inflation adopted pursuant to section 8.5A).

332. Section 8.34 provides for the application of depreciation principles in the determination of Total Revenue using internal rate of return or net present value methodologies. If the internal rate of return or net present value methodology is used,

then the notional depreciation over the Access Arrangement Period for each asset or group of assets that form part of the Capital Base is:

> (a) for an asset that was in existence at the commencement of the Access Arrangement Period, the difference between the value of that asset in the Capital Base at the commencement of the Access Arrangement Period and the value of that asset that is reflected in the Residual Value; and
>
> (b) for a New Facility installed during the Access Arrangement Period, the difference between the actual cost or forecast cost of the Facility (whichever is relevant) and the value of that asset that is reflected in the Residual Value,
>
> and, to comply with section 8.33:
>
> (c) the Residual Value of the Capital Base should reflect notional depreciation that meets the principles of section 8.33; and
>
> (d) the Reference Tariff should change over the Access Arrangement Period in a manner that is consistent with the efficient growth of the market for the Services (and which may involve a substantial portion of the depreciation taking place towards the end of the Access Arrangement Period, particularly where the calculation of the Reference Tariffs has assumed significant market growth and the pipeline has been sized accordingly).

333. Section 8.35 of the Code provides for the cash flow needs of the Service Provider to be recognised in the determination of the Depreciation Schedule:

> In implementing the principles in section 8.33 or 8.34, regard must be had to the reasonable cash flow needs for Non Capital Costs, financing cost requirements and similar needs of the Service Provider.

334. For the purposes of its proposed Access Arrangement of 15 December 1999, GGT applied a "units-of-production" depreciation methodology to derive a closing value of the Capital Base at 30 December 2004, which was then used in a net present value calculation of Total Revenue. This methodology derives a depreciation schedule under which recovery of capital occurs over an assumed economic life of the asset of 40 years from 1996, and capital recovery "tracks" a forecast of pipeline throughput. GGT's throughput forecast on which the proposed depreciation schedule is based is indicated in Appendix C of the Access Arrangement Information and shows throughput continuing at approximately 25 PJ/annum (68.5 TJ/day) until 2013, declining to approximately 8 PJ/annum (22 TJ/day) by 2017 and remaining at about that level for the remainder of the projected life of the pipeline until 2036.

335. The effect of the assumed throughput forecast and the use of the units-of-production depreciation methodology is accelerated depreciation where a greater proportion of depreciation would be recovered in earlier years, since throughput is projected to decline in later years.

336. GGT sought to justify the use of the units-of-production methodology by indicating that this methodology matches the profile of capital recovery to the profile of revenue received over time. GGT submitted that the units-of-production methodology overcomes difficulties of straight-line depreciation, which assumes that revenue (and the opportunity to recover capital) is evenly distributed over the life of the asset, yet facilitates the objective of determining a levelised tariff.

337. GGT sought to justify the assumption of a 40 year economic life of the GGP by reference to provisions of the *Goldfields Gas Pipeline Agreement Act 1994* that allows

for an initial pipeline licence of 21 years, followed by one renewal of 21 years yielding a total of 42 years. Since pipeline design and construction took just under two years, during which no revenue was derived from the transport of natural gas, GGT considered that the "regulatory life" and therefore economic life of the pipeline is 40 years: 1997 to 2036 inclusive.

338. In its submission of 17 December 2002, GGT described a different methodology for determining the depreciation schedule. In this submission, GGT described a net present value calculation of Total Revenue for an Access Arrangement Period of 1 July 2002 to 30 June 2007, with a closing value of the Capital Base calculated according to a straight-line depreciation schedule over an assumed remaining economic life of 36 years from 1 July 2002. GGT sought to justify the use of this depreciation methodology by indicating that this methodology is "carried over" from the determination of third-party tariffs under the State Agreement.

339. There are two elements of the methodology for determination of the Reference Tariff described by GGT in its submission of 17 December 2002 that have a bearing on regulatory depreciation and the time path of tariffs:

- depreciation of the Capital Base by a straight-line methodology; and
- calculation of Total Revenue in nominal terms rather than real terms.

340. In its submission, GGT calculated a Reference Tariff based on depreciation of asset value by a straight-line, historical-cost methodology over a remaining life of the pipeline assets of 36 years from July 2002. Under this methodology, the Capital Base is valued into the future in dollar values as at the time the capital investment occurred. At the commencement of each regulatory period, the Capital Base is valued at the closing value of the previous regulatory period, without adjustment of the value for inflation over the previous period. Under the calculation described by GGT, GGT is compensated for the effects of inflation on the "value" of the Capital Base through use of a nominal rather than real Rate of Return in the calculation of Total Revenue and the Reference Tariff.

341. The depreciation methodology used by GGT for the purpose of its submission is different to that generally used by Service Providers and approved by regulators under the Code. The more common approach has been a real or current cost accounting approach to straight-line depreciation, whereby the Service Provider is compensated for the effects of inflation on the "value" of the Capital Base through escalation of the closing value at the end of each regulatory period by the rate of inflation in that period to derive an opening value for the next regulatory period in "dollars of the day".

342. The two different approaches to depreciation give rise to different values of depreciation and consequently different time paths in the value of the Capital Base and the Reference Tariff. The nominal calculation (the historical cost, straight-line depreciation as described by GGT) results in more rapid depreciation of the Capital Base, a higher "depreciation cost" and hence a greater initial value of the Reference Tariff.

343. If realised inflation is the same as forecast inflation, then tariffs derived from both methodologies would return the same present value of revenue. Implications for the

Service Provider are differences in tariff paths and cash flows, and different exposures to inflation risk. The nominal calculation gives rise to higher tariffs early in the life of the asset and brings forward cash flows. The nominal calculation does, however, expose the Service Provider to inflation risk. That is, if inflation in a regulatory period is higher than that forecast at the commencement of the regulatory period, then the Service Provider will be under-compensated for the erosion of the residual value of the Capital Base by inflation. Conversely, if inflation in a regulatory period is less than that forecast at the commencement of the regulatory period, then the Service Provider will be over-compensated for the erosion of the residual value of the Capital Base by inflation. Under a real calculation, the Service Provider is exactly compensated for the effects of inflation on the residual value of the Capital Base.

344. The Authority has considered the depreciation methodologies proposed by GGT for its proposed Access Arrangement of 15 December 1999 and for its submission of 17 December 2002 against the principles for a Depreciation Schedule as set out in section 8.33 of the Code.

345. Section 8.33 requires that the depreciation allowance in the determination of Total Revenue should:

- result in the Reference Tariff changing in a manner that is consistent with the efficient growth in the market for the Services;[75]
- be over the economic life of the asset or group of assets;[76]
- to the extent reasonable, adjust the life of the assets over time to reflect changes in the expected economic life of the assets;[77] and
- result in the Capital Base being "returned" only once (i.e. no upward revaluations of assets).[78]

346. With respect to the first two of these principles, "consistency of tariffs with the efficient growth in the market" and "depreciation over the economic life of the assets" are specific requirements, the Gas Code provides further guidance: forecasts, in this case of the economic life of the pipeline and the size of the market for Services, must "represent best estimates arrived at on a reasonable basis".[79]

347. The third of the principles – which requires any changed market circumstances to be reflected in the forward-looking depreciation schedule – implies that a depreciation schedule determined as part of the process of determining a Reference Tariff need not be "set in stone". That is, at the time of tariff re-sets (i.e. review of the Access Arrangement), new information having a bearing on forecasts of the economic life of the pipeline and future market for Services may be taken into account in revising the

[75] Section 8.33(a) of the Code.

[76] Section 8.33(b) of the Code.

[77] Section 8.33(c) of the Code.

[78] Section 8.33(d). A negative revaluation would be classed as 'capital redundancy', and subject to the principles in sections 8.27 to 8.29.

[79] Section 8.2(e) of the Code.

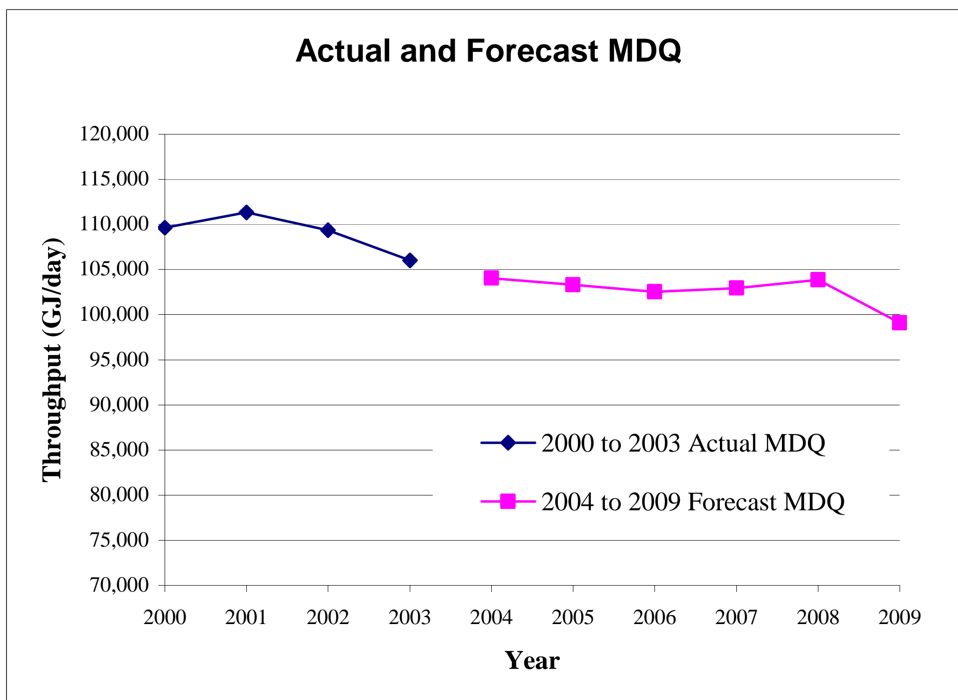
depreciation schedule. The fourth principle is a constraint on depreciation, requiring that the Service Provider not over-recover capital. Neither of these two principles is relevant to the current assessment.

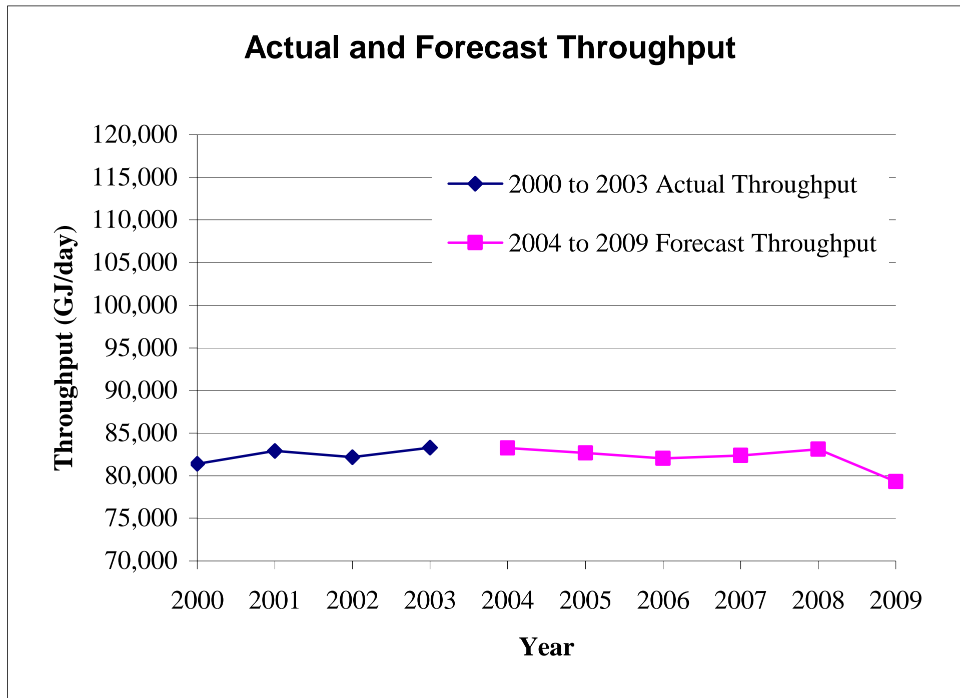
348. The purpose of the first of the principles set out in section 8.33 is not clear, although some indication is given by the parenthetic statement of this section of the Code:

> … and which may involve a substantial portion of the depreciation taking place in future periods, particularly where the calculation of the reference Tariffs has assumed significant market growth and the pipeline has been sized accordingly.

349. This suggests that the objective of the first principle is to ensure that the level of recovery of capital through tariffs corresponds generally with the level of use of the pipeline, limiting the prospect for excessively high tariffs at times of low pipeline use, such as where a new pipeline is first commissioned.

350. GGT has provided the Authority with forecasts of contracted capacity (MDQ) and throughput to 2009, shown in the diagrams below. These forecasts are further examined later in this Amended Draft Decision (paragraph 397 and following), and are accepted for the purposes of calculation of the Reference Tariff.





351. GGT's forecasts are based on current contracts and GGT has not attempted to make forecasts beyond these, i.e. with some prediction or forecast of renewal of existing contracts or entry into new contracts.

352. Notwithstanding the absence of consideration of long term prospects for the gas market in the forecasts, the latest forecasts provided by GGT do suggest a market for gas transmission that is stable over the short to medium term. This is contrary to the forecast provided by GGT in its Access Arrangement Information of 15 December 1999 and suggests that that forecast is not the current best estimate of pipeline use into the future. Given these circumstances, the use of that forecast and the units-of-production depreciation methodology would not appear to comply with the requirement of the Code that the depreciation methodology result in the Reference Tariff changing in a manner that is consistent with the efficient growth in the market for the Services. Rather, an annuity methodology for calculation of depreciation – that would lead to constant tariffs over time – or a straight-line methodology – that leads to constant recovery of capital over time, although with declining tariffs, would appear to comply with this requirement. There would not, however, appear to be any particular justification for the front-ending of the depreciation schedule through use of an historical-cost asset accounting methodology as proposed by GGT in its nominal calculation of Total Revenue.

353. The second principle of section 8.33 of the Code requires that the depreciation schedule should be designed so that each asset or group of assets that form part of the pipeline is depreciated over the economic life of the asset or group of assets.

354. GGT has proposed depreciation over an assumed economic life of 36 years from 1 July 2002 based on the duration of the licence for the pipeline and the consideration given to project life in the original determination of third-party tariffs, which was

42 years from 1994.[80] The assumed economic life of 42 years is likely to be less than the technical life of a pipeline asset such as the GGP, for which a weighted average technical life of assets of 65 years was assumed in derivation of a DORC value (paragraph 104 and following).

355. As justification for depreciation over an economic life of less than the technical life of the assets, GGT has argued that all of the project's economics were based upon the recovery of costs over 42 years and that to adopt a longer life impacts upon GGT's legitimate business interests.

356. GGT's argument relates primarily to its contentions of rights under the State Agreement, which are not directly relevant to the derivation of the depreciation allowance under the Code. That said, however, the Authority takes the view that GGT's position that depreciation over an assumed economic life of 42 years would be more appropriate than depreciation over the physical life of the pipeline assets is not necessarily unreasonable. Given that the level of use of the pipeline is related directly or indirectly to the level of mining activity in the Pilbara and Eastern Goldfields regions and that mines have finite but uncertain lives, it is not unreasonable to presume that the economic life of the pipeline could be circumscribed by a reduction in mining activity. While it would be difficult (if not impossible) to make a reliable prediction of the economic life of the pipeline, 42 years could possibly be a reasonable estimate of the (expected) economic life. Also, while accelerated recovery of capital by assumption of an economic life of less than the physical life of assets results in higher tariffs early in the life of the pipeline, lower tariffs would occur later in the life of the pipeline if indeed the pipeline life extends beyond the 42 years projected by GGT.

357. The Authority therefore accepts GGT's proposal for use of a straight-line depreciation methodology or depreciation of the pipeline assets over an economic life that is less than the physical life of the principal pipeline assets. The straight-line depreciation methodology is consistent with standard practice for regulated pipelines in Australia, and this methodology and the assumption of 42 years economic life are arguably appropriate given the nature of the market for the GGP and the future outlook for demand for pipeline Services.

358. The Authority is mindful that the historical cost accounting methodology used by GGT for the calculation of Total Revenue has the effect of accelerating depreciation and considers that there is no substantive justification in terms of expectations of a decline in the market for pipeline Services. However, taking into account that the effect of this is to affect the time path of tariffs but not the present value of returns to GGT over the life of the pipeline, and that the required amendments to the Access Arrangement under this Amended Draft Decision result in a reduction in tariffs for the pipeline despite the accelerated depreciation,[81] the Authority considers that the historical-cost, straight-line depreciation methodology used by GGT for the purposes

[80] The Authority notes the inconsistency between GGT's reasoning for the proposed economic life that supports an economic life of 42 years from 1994 to 2036, and the proposed remaining life of 36 years from 1 July 2002 that suggests an economic life of 44 years from 1994 to 2038, and this is given further consideration in the Authority's conclusions on depreciation, below (paragraph 359).

[81] Refer to paragraph 383 and following for the Authority's consideration of the Reference Tariff.

of the tariff calculation described in its submission of 17 December 2002 complies with the requirements of the Code.

359. Notwithstanding this, the Authority notes two errors by GGT in its use of this methodology. Firstly, the Authority notes that the indication by GGT in its submission of 17 December 2002 of a remaining asset life of 36 years from 1 July 2002 is inconsistent with GGT's reasoning of an economic life for the GGP of 42 years from 1994. Secondly, in the tariff calculation in this submission, GGT has determined depreciation for all new investment on the basis of a 36 year life of the assets regardless of the year in which the investment is made. This is inconsistent with the concept of depreciation over an economic life of the pipeline, for which consistency would require that New Facilities Investment be depreciated over the remaining economic life, i.e. investment made in 2002 depreciated over a life of 36 years, investment made in 2003 depreciated over a life of 35 years, and so on. The Authority has corrected both of these errors in its determination of Total Revenue and the Reference Tariff for the purposes of this Amended Draft Decision, assuming a remaining economic life of 36.5 years from 1 January 2000 and depreciation of New Facilities Investment over remaining economic life from the year in which the investment occurs.

Non Capital Costs

360. Sections 8.36 and 8.37 of the Code provide for the recovery of Non Capital Costs through the Reference Tariff:

> 8.36 Non Capital Costs are the operating, maintenance and other costs incurred in the delivery of the Reference Service. Non Capital Costs may include, but are not limited to, costs incurred for generic market development activities aimed at increasing long-term demand for the delivery of the Reference Service.
>
> 8.37 A Reference Tariff may provide for the recovery of all Non Capital Costs (or forecast Non Capital Costs, as relevant) 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, and to achieve the lowest sustainable cost of delivering the Reference Service.

361. GGT provided a forecast of Non Capital Costs in the Access Arrangement Information submitted with the proposed Access Arrangement on 15 December 1999, as indicated in the table below. The proposed Non Capital Costs were indicated to be related to "pipeline operating and maintenance costs" and "management costs":

- pipeline operating and maintenance costs – those costs incurred in the operation and maintenance of the GGP and associated facilities, including direct operations, operations support, engineering support, right-of-way management, and direct administration and management; and

- management costs – those costs incurred in the high level management of the GGP and the provision of commercial and contractual support to direct operations, including management fees, legal, public relations, regulatory-related activities, and communications leases.

Goldfields Gas Pipeline Forecast Non Capital Costs
(Information provided 15 December 1999, nominal $million)

Year	2000	2001	2002	2003	2004
Pipeline operating and maintenance costs	6.635	6.937	7.133	7.386	7.781
Management costs	4.669	4.315	4.169	4.200	4.931
Total Non Capital Costs	11.304	11.252	11.302	11.586	12.712

362. The costs presented in the table above do not include "used gas" (the sum of compressor fuel and unaccounted for gas) or linepack adjustments. Marketing and overhead costs are included as part of management costs. Marketing and overhead costs are indicated to include, but not be limited to:

- salaries and related on-costs;
- legal costs;
- marketing costs;
- public relations costs;
- commercial and operations management fees;
- regulatory costs; and
- project evaluation costs.

363. Further details of the breakdown of forecast Non Capital Costs were provided in the Access Arrangement Information.[82]

364. In its submission of 17 December 2002, GGT provided data on actual Non Capital Costs to June 2002, and revised forecasts of New Facilities Investment from 1 July 2002 to 30 June 2007, as follows.[83]

Goldfields Gas Pipeline actual and forecast Non Capital Costs
(information provided 17 December 2002, nominal $million)

Year	2000	2001	½ 2002	2002/03	2003/04	2004/05	2005/06	2007/08
	Actual Expenditure			Forecast Expenditure				
Non Capital Costs	9.510	10.496	5.604	16.300	15.900	15.700	16.100	16.500

365. GGT also provided the Authority with further details of Non Capital Costs, including a breakdown of costs, for the period 1 July 1996 to 30 December 2004, comprising actual costs to 30 September 2002 and forecast costs thereafter. The breakdown of

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[82] AAI sections 5.1 and 5.2.

[83] GGT Submission, 17 December 2002, Schedule 2.

costs indicated costs for a range of line items categorised into "AGL Operating Costs", "GGT Operating Costs" and "CMS Commercial Operations". The breakdown in these three categories of costs is set out in the Confidential Annexure to this Amended Draft Decision.

366. In March 2004, GGT provided further data on actual and forecast Non Capital Costs by calendar year to 31 December 1999. Actual and forecast Non Capital Costs evident from this data are as follows.

Goldfields Gas Pipeline actual and forecast Non Capital Costs (information provided March 2004, nominal $million)

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	Actual Expenditure				Forecast Expenditure					
Pipeline operation and maintenance	5.85	5.83	6.35	8.78	10.01	10.06	9.47	9.70	10.06	10.25
Management	3.15	3.05	3.80	4.34	4.14	4.25	4.43	4.60	4.82	5.01
Regulation	0.37	1.68	1.99	2.06	1.39	0.87	0.66	0.73	0.75	0.78
Total	**9.37**	**10.56**	**12.14**	**15.19**	**15.53**	**15.19**	**14.56**	**15.03**	**15.63**	**16.03**

367. The time series of actual and forecast Non Capital Costs shows these costs to have been increasing at a rate in excess of the rate of inflation since 1997 to 2003, with a very marked increase in actual costs each year from 2000 to 2003.

368. GGT has indicated that the increase was due to the following.

- Pipeline operating and maintenance costs increasing in 2003 as a result of increases in the costs of compressor station parts, DCVG survey, cleaning prior to intelligent pig, motor vehicles and fly in - fly out travel.

- Management costs increasing substantially from previous forecasts due to the following major cost increases:

  - increase in insurance costs;

  - administration cost increase previously budgeted under operating budget; and

  - contingent provision in 2003 for regulatory costs and increases in general regulatory costs.

369. GGT has not provided the Authority with any information to substantiate the claims of cost increases, or information that would enable it to assess the reasonableness of these forecast increases in costs.

370. The Authority notes that the cost items for which GGT has indicated increases in forecast costs are items that would be expected to affect any gas transmission pipeline in Western Australia. Similar cost increases would therefore be expected for the DBNGP in Western Australia. In August 2003, Epic Energy submitted to the

Regulator revised forecasts of Non Capital Costs for the period to 2009.[84] This forecast from Epic Energy indicates Non Capital Costs for the DBNGP to be increasing over the period 1999 to 2009 at a rate similar, on average, to a forecast rate of inflation (common in cost forecasts of both Epic Energy and GGT) of 2.5 percent, without obvious reflection of cost increases for gas transmission pipelines as claimed by GGT.

371. The Authority has also compared the actual and forecast costs for the GGP with forecast costs approved by regulators for the Amadeus Basin to Darwin Pipeline and the Moomba to Sydney Pipeline, as indicated in the following table.

Comparison of Non Capital Costs across comparable Australian transmission pipelines

Service Provider	**EAPL**	**APT**	**GGT**
Pipeline	Moomba to Sydney[85]	ABD Pipeline[86]	GGP
Data year	2004	2003/04	2003
System Characteristics			
Total pipeline length (km)	2024	1513	1378
Compressor stations	3	1	3
Gas transported (TJ/day)	246	46	82
Non Capital Costs			
Total Non Capital Costs ($million)	19.1[87]	8.8	15.19
Cost Ratios			
Total Non Capital Costs per km of pipeline ($'000)	9.42	5.82	11.02
Total Non Capital Costs per TJ/day per km of pipeline ($'000)	0.038	0.126	0.134

372. The comparison indicates that the forecast Non Capital Costs for the GGP are relatively high in comparison with the other two pipelines that have similar characteristics in length and numbers of compressor stations. While the comparison provides insufficient data for reliable benchmarking of Non Capital Costs, the comparison causes the Authority to question whether the actual and forecast operating costs of GGT meet the requirements of section 8.37 of the Code.

373. The Authority is of the view that GGT has failed to provide sufficient information to the Authority to make a determination that the forecast Non Capital Costs comply with the requirements of section 8.37 of the Code. The Authority is also of the view that there is evidence in the comparison of forecast Non Capital Costs for the GGP

[84] Cost forecasts are contained in: Epic Energy, 8 August 2003, Dampier to Bunbury Natural Gas Pipeline Revised Proposed Access Arrangement Information under the National Access Code, Submission Version (Published on the website of the Economic Regulation Authority, 30 December 2003).

[85] Pipeline and Non Capital Cost data from ACCC, 2 October 2003, Final Decision, East Australian Pipeline Limited, Access Arrangement for the Moomba to Sydney Pipeline System.

[86] Pipeline and Non Capital Cost Data from N.T. Gas Pty Limited, February 2003, Access Arrangement Information for the Amadeus Basin to Darwin Pipeline.

[87] $18.6 million stated in real values for 2003/04, inflated by a factor of 1.025 to derive a value in 2004 dollar values.

with the forecast Non Capital Costs for other Australian transmission pipelines to suggest that the actual and forecast Non Capital Costs stated by GGT may not comply with the requirements of section 8.37 of the Code. In the absence of sufficient information to enable the Authority to make an assessment of reasonable Non Capital Costs, the Authority has assessed the Reference Tariff on the basis of actual Non Capital Costs incurred for the period 2000 to 2003, and Non Capital Costs for subsequent years determined as the average of actual annual Non Capital Costs for the period 2000 to 2003, inflated annually by the rate of inflation assumed in determination of the Rate of Return (paragraph 326 of this Amended Draft Decision).

Goldfields Gas Pipeline Non Capital Costs redetermined by the Authority in assessment of the Reference Tariff (nominal $million)

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Non Capital Costs	9.37	10.56	12.14	15.19	12.56	12.88	13.22	13.56	13.92	14.28

Total Revenue

374. Sections 8.4 and 8.5 of the Code require that the revenue to be generated from the sales (or forecast sales) of all Services over the Access Arrangement Period (the Total Revenue) be determined, or be able to be expressed in terms of, one of three methodologies.

> **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***).
>
> **IRR**: The Total Revenue will provide a forecast Internal Rate of Return (IRR) for the Covered Pipeline that is consistent with the principles in sections 8.30 and 8.31. The IRR should be calculated on the basis of a forecast of all costs to be incurred in providing such Services (including capital costs) during the Access Arrangement Period.
>
> The initial value of the Covered Pipeline in the IRR calculation is to be given by the Capital Base at the commencement of the Access Arrangement Period and the assumed residual value of the Covered Pipeline at the end of the Access Arrangement Period (***Residual Value***) should be calculated consistently with the principles in this section 8.
>
> **NPV**: The Total Revenue will provide a forecast Net Present Value (NPV) for the Covered Pipeline equal to zero. The NPV should be calculated on the basis of a forecast of all costs to be incurred in providing such Services (including capital costs) during the Access Arrangement Period, and using a discount rate that would provide the Service Provider with a return consistent with the principles in sections 8.30 and 8.31.
>
> The initial value of the Covered Pipeline in the NPV calculation is to be given by the Capital Base at the commencement of the Access Arrangement Period and the assumed Residual Value at the end of the Access Arrangement Period should be calculated consistently with the principles in this section 8.
>
> The methodology used to calculate the Cost of Service, an IRR or NPV should be in accordance with generally accepted industry practice.

> However, the methodology used to calculate the Cost of Service, an IRR or NPV may also allow the Service Provider to retain some or all of the benefits arising from efficiency gains under an Incentive Mechanism. The amount of the benefit will be determined by the Relevant Regulator in the range of between 100% and 0% of the total efficiency gains achieved.

375. Section 8.5A of the Code provides for different methodologies for dealing with the effects of inflation in the Total Revenue and Reference Tariff calculation.

> 8.5A Any of the methodologies described in section 8.4 or permitted under section 8.5, may be applied:
>
> (a) on a nominal basis (under which the Capital Base and Depreciation are expressed in historical cost terms and all other costs and revenues are expressed in current prices and a nominal Rate of Return is allowed);or
>
> (b) on a real basis (under which the Capital Base, Depreciation and all costs and revenues are expressed in constant prices and a real Rate of Return is allowed); or
>
> (c) on any other basis in dealing with the effects of inflation,
>
> provided that the basis used is specified in the Access Arrangement, is approved by the Relevant Regulator and is applied consistently in determining the Total Revenue and Reference Tariffs.

376. Section 8.6 of the Code recognises that a range of values may be attributed to the Total Revenue by the above methodologies. This recognises the manner in which the Rate of Return, Capital Base, Depreciation Schedule and Non Capital Costs may be determined, in each case involving the exercise of the Authority's discretion. Section 8.6 provides that, in order to determine an appropriate value within this range, the Authority may have regard to any financial and operational performance indicators considered by the Authority to be relevant in order to determine the level of costs within the range of feasible outcomes under section 8.4 of the Code that is most consistent with the objectives of section 8.1 of the Code. If the Authority has considered financial and operational performance indicators for the purposes of section 8.6 of the Code, section 8.7 requires the Authority to identify the indicators and provide an explanation of how they have been taken into account.

377. For its proposed Access Arrangement of 15 December 1999, GGT used an NPV methodology for determining Total Revenue.[88] GGT stated that the NPV approach was proposed because it yields levelised tariffs by averaging costs over the Access Arrangement Period, and that the NPV methodology produces a price path expressed in real terms (inflation adjusted), which is known and provides simplicity and predictability for Users.

378. GGT's proposed Total Revenue was stated as follows,[89] with a present value of $320.62 million, calculated using GGT's proposed nominal pre-tax WACC of 15.0 percent.

[88] Access Arrangement Information, sections 7.2.1, 7.2.2.

[89] Access Arrangement Information, section 7.5.3.10.

Proposed Total Revenue (GGT proposed Access Arrangement, 15 December 1999)

Year	2000	2001	2002	2003	2004
Total Revenue (nominal $million)	90.0	92.1	99.1	100.9	100.3

379. In its submission of 17 December 2002, GGT presented a revised determination of Total Revenue for the period 1 July 2002 to 30 June 2007, indicated as follows, with a present value of $387.22 million calculated using the a nominal pre-tax WACC (presented by GGT in its submission) of 16.2 percent.

Proposed Total Revenue (GGT submission of 17 December 2002)

Year	2002/03	2003/04	2004/05	2005/06	2006/07
Total Revenue (nominal $million)	120.1	115.4	116.8	120.2	123.0

380. As noted previously in this Amended Draft Decision, the Authority is not satisfied that values proposed by GGT for the Initial Capital Base, Rate of Return and Non Capital Costs are appropriate values under the relevant provisions of the Code. The Authority has therefore made a Total Revenue calculation, using the same nominal, net present value methodology as used by GGT, but with values of cost parameters as follows.

Parameter Values in the Authority's Recalculation of Total Revenue

Initial Capital Base	$480 million at 31 December 1999, including working capital of $1.3 million									
New Facilities Investment	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
	3.64	8.39	1.12	10.21	5.87	1.25	1.31	1.38	1.45	1.52
Nominal pre-tax Rate of Return	10.81% for the 6 year period 1 January 2000 to 31 December 2005 10.79% for the 10 year period 1 January 2000 to 31 December 2009									
Depreciation	Straight-line depreciation over remaining asset life of 36.5 years from 1 January 2000									
Non Capital Costs	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
	9.37	10.56	12.14	15.19	12.56	12.88	13.22	13.56	13.92	14.28

381. The Authority has also made assumptions in the determination of Total Revenue that differ in two further respects from GGT's determination of Total Revenue set out in its submission of 17 December 2002:

- correction of the assumed remaining economic life of the pipeline for depreciation purposes (as described in paragraph 359); and
- correction of inconsistent assumptions as to timing of costs and revenues in GGT's net present value model so that all costs and revenues are assumed to occur at the end of each year (GGT in its model had assumed New Facilities Investment to occur in the middle of each year and all other costs and revenues to occur at the end of each year).

382. On the above basis, the Authority has concluded that a Total Revenue with a present value in the order of $320.67 million for the six-year period 1 January 2000 to 31 December 2005, and in the order of $442.36 million for the ten-year period 1 January 2000 to 31 December 2009[90] would conform to the principles of the Code.

Cost/Revenue Allocation and Reference Tariff

383. In determining Reference Tariffs, a Service Provider must determine (explicitly or implicitly) the costs or share of costs of pipeline operation that will be recovered from revenues from Reference Services and other Services. Principles for the allocation of costs/revenues between Services are provided in sections 8.38 to 8.43 of the Code.

384. Section 8.38 of the Code requires that Reference Tariffs should be designed to only recover that portion of Total Revenue which includes:

(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 set out in section 8.1 of the Code and is otherwise fair and reasonable.

385. Section 8.39 of the Code provides for the Authority to require a different methodology to be used for cost/revenue allocation than may have been proposed by a Service Provider in an Access Arrangement pursuant to section 8.38 of the Code. However, if such a requirement is proposed, the Authority must provide a detailed explanation of the methodology that it requires to be used.

386. Section 8.40 of the Code addresses the allocation of Costs/Revenue between Reference Services and Rebatable Services. A Rebatable Service is one where a portion of any revenue realised from sales of the Service is rebated to Users (either through a reduction in the tariff or through a direct rebate to the relevant User or Users). Under section 10.8 of the Code, a Rebatable Service is a Service where:

(a) there is substantial uncertainty regarding expected future revenue from sales of that Service due to the nature of the Service and/or the market for that Service; and

(b) the nature of the Service and the market for that Service is substantially different to any Reference Service and the market for that Reference Service.

387. If a Reference Service is provided jointly with a Rebatable Service, then all or part of the Total Revenue that would have been recovered from the Rebatable Service under section 8.38 of the Code (if that Service was a Reference Service) may be recovered from the Reference Service provided that an appropriate portion of any revenue realised from sales of any such Rebatable Service is rebated to Users of the Reference Service (either through a reduction in the Reference Tariff or through a direct rebate to the relevant User or Users). The structure of such a rebate mechanism should be determined having regard to the following objectives set out in section 8.40 of the Code:

[90] The term of the Access Arrangement Period is discussed in detail at paragraph 676 and following.

(a) providing the Service Provider with an incentive to promote the efficient use of capacity, including through the sale of Rebatable Services; and

(b) Users of the Reference Service sharing in the gains from additional sales of services, including from sales of Rebatable Services.

388. Section 8.41 provides a Service Provider with discretion to adopt alternative approaches to cost/revenue allocation, subject to any approach adopted having substantially the same effect as the approach outlined in sections 8.38 and 8.40 of the Code.

389. Section 8.42 relates to the allocation of costs/revenue between Users. This section requires that, subject to provisions for prudent discounts in section 8.43 of the Code, the Reference Tariff be designed such that the proportion of Total Revenue recovered from actual or forecast sales of a Reference Service to a particular User of that Service is consistent with the principles described in section 8.38 of the Code.

390. Section 8.43 of the Code provides for a Service Provider to give prudent discounts on Reference Tariffs or Equivalent Tariffs for Non-Reference Services in particular circumstances. A User receiving a discount would be paying a proportion of Total Revenue that is less than the proportion that would be paid by the User under the principles of sections 8.38 and 8.40 of the Code. Section 8.43 of the Code provides for such a discount to be given to a User if:

(a) the nature of the market in which a User or Prospective User of a Reference Service or some other Service operates, or the price of alternative fuels available to such a User or Prospective User, is such that the Service, if priced at the nearest Reference Tariff (or, if the Service is not a Reference Service, at the Equivalent Tariff) would not be used by that User or Prospective User; and

(b) a Reference Tariff (or Equivalent Tariff) calculated without regard to revenues from that User or Prospective User would be greater than the Reference Tariff (or Equivalent Tariff) if calculated having regard to revenues received from that User or Prospective User on the basis that it is served at a price less than the Reference Tariff (or Equivalent Tariff).

391. The effect of section 8.43(b) is to require that a discount may only be provided to a User if the incremental revenue from that User exceeds the incremental cost of providing a Service to that User, and the incremental revenue consequently makes some contribution to the joint costs of providing pipeline Services. The proportion of Total Revenue that comprises the discount may be recovered from other Users of the Reference Service or some other Service or Services in a manner that the Authority is satisfied is fair and reasonable.

392. For its proposed Access Arrangement of 15 December 1999, GGT did not determine a Reference Tariff from the Total Revenue derived pursuant to sections 8.4 to 8.6 of the Code, but rather specified a Reference Tariff independently of the Total Revenue. The Reference Tariff specified by GGT was the "A4 Tariff" that was subsequently put in place by GGT at 1 January 2000, pursuant to the State Agreement.

393. The Reference Tariff proposed by GGT comprised three charges levied on Users based on contracted capacity (MDQ), distance of gas transportation and throughput. GGT proposed a scale of charges according to the duration of the Service Agreement with the User, with base charges specified for a 16 to 20 year contract and premiums of 5 percent, 10 percent and 20 percent added to the base charges for contract

durations of 11 to 15 years, 6 to 10 years and 1 to 5 years, respectively. The Reference Tariff charges are specified in the Sixth Schedule of the proposed General Terms and Conditions, with the charges indicated in dollar values of June 1997 and subject to escalation for inflation as described in clause 9 of the General Terms and Conditions. The schedule of charges for the proposed Reference Tariff is shown in the table below.

Proposed Reference Tariff (as submitted 15 December 1999)
($ nominal at June 1997)

Contract Duration	Toll Charge ($/GJ MDQ)	Capacity Charge ($/GJ MDQ/km)	Throughput Charge ($/GJ throughput/km)
1 – 5 years	0.269392	0.001556	0.000494
6 – 10 years	0.246943	0.001427	0.000453
11 – 15 years	0.235718	0.001362	0.000433
16 – 20 years	0.224494	0.001297	0.000412

394. Taking into account the escalation of tariff charges for inflation as proposed by GGT under clause 9 of the General Terms and Conditions, the proposed Reference Tariff corresponds to the following values of Reference Tariff charges at 1 January 2000.

Proposed Reference Tariff escalated to values at 1 January 2000
($ nominal at 1 January 2000)

Contract Duration	Toll Charge ($/GJ MDQ)	Capacity Charge ($/GJ MDQ/km)	Throughput Charge ($/GJ throughput/km)
1 – 5 years	0.276564	0.001597	0.000507
6 – 10 years	0.253517	0.001465	0.000465
11 – 15 years	0.241993	0.001398	0.000445
16 – 20 years	0.230471	0.001332	0.000423

395. For transportation of gas at 85 percent load factor, the structure of the Reference Tariff proposed by GGT (in its proposed Access Arrangement of 15 December 1999) comprises "fixed" charges of between about 81 and 83 percent and a "variable" (throughput related) charge of between about 17 and 19 percent (depending upon Delivery Point location). The Authority notes that a ratio of fixed charges to the total charge of about 80 to 90 percent is in accordance with common industry practice for gas pipelines, and also that it is common practice to establish fixed charges at a level sufficient to recover fixed costs and throughput charges at a level sufficient to recover variable costs.[91] For the GGP, the ratio of capital costs (return on assets and depreciation) and Non Capital Costs is approximately 84:16 under the cost parameters

[91] For example, East Australian Pipeline Limited proposed determination of capacity and throughput related charges for the Moomba to Sydney Pipeline at a ratio of approximately 90:10 and on the basis of "fixed" and "variable" costs, an arrangement subsequently approved by the ACCC (Final Decision, East Australian Pipeline Limited Access Arrangement for the Moomba to Sydney Pipeline System, October 2003). Epic Energy proposed determination of fixed and throughput charges for the DBNGP at a ratio of approximately 95:5 and on the basis of "fixed" and "variable" costs, an arrangement subsequently approved by the Regulator (Final Decision: Access Arrangement Dampier to Bunbury Natural Gas Pipeline, May 2003).

and Total Revenue adjusted in accordance with this Amended Draft Decision. On this basis, the Authority considers that the tariff structure proposed by GGT is reasonable.

396. In its submission of 17 December 2002, GGT presented a different Reference Tariff that it proposed should apply for the period 1 July 2002 to 30 June 2007. This Reference Tariff was calculated on the basis of different cost parameters and a different Total Revenue described in that submission, and considered in previous sections of this Amended Draft Decision. The Reference Tariff presented in this submission comprised the same component charges of the Reference Tariff as originally proposed. GGT did not explicitly indicate in its submission of 17 December 2002 that it intended to maintain a scale of charges according to the duration of the Service Agreement with the User, but rather indicated that it calculated the Reference Tariff indicated in this submission assuming that all Users pay the same tariff. GGT did, however, indicate that it intends to maintain the same tariff structure as tariffs previously implemented under clause 9 of the State Agreement, suggesting that GGT intends maintenance of a scale of charges according to the duration of the Service Agreement with the User.

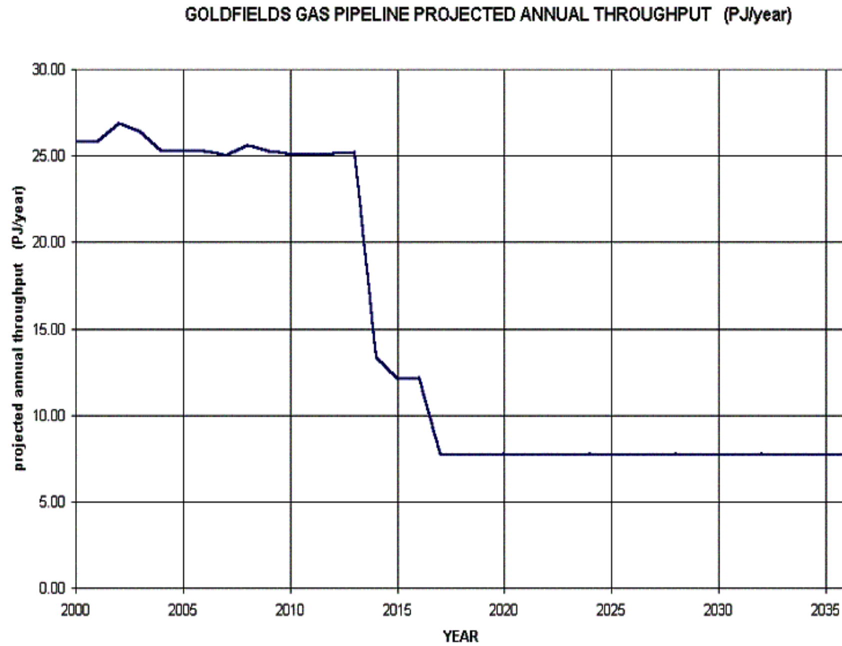
397. In deriving a Reference Tariff from Total Revenue, forecasts of contracted capacity and throughput are necessary.

398. For its proposed Access Arrangement for 15 December 1999, GGT presented forecasts of future gas throughput as follows.

Forecast gas throughput (proposed Access Arrangement, 15 December 1999)

Year	2000	2001	2002	2003	2004
Projected pipeline throughput TJ / day	71	71	74	72	69

399. GGT also presented a forecast of gas throughput for the period to 2036, indicated in Appendix C of the Access Arrangement Information and reproduced as follows.



400. In its submission of 17 December 2002, GGT described a calculation of a Reference Tariff based on an updated forecast of contracted pipeline capacity and throughput for the period July 2002 to June 2007, as indicated below.[92]

GGT forecasts of contracted capacity and throughput (information submitted December 2002)

	2002/03	2003/04	2004/05	2005/06	2006/07
Total Contracted Capacity (MDQ, TJ/day)	108.4	100.1	97.9	98.2	98.2
Total Throughput (TJ/day)	81.5	78.5	80.3	80.5	80.5

401. While no substantiating information was provided for these forecasts in GGT's 17 December 2002 submission, the Authority obtained further information on forecasts from both GGT and the current Users of the GGP, including obtaining from GGT data on actual contracted capacity and throughput to 31 December 2003, and forecasts of contracted capacity and throughput for the period 2004 to 2009.

402. The data obtained from GGT on actual and forecast contracted capacity and throughput for the period to 2009 is shown in the following table.

[92] GGT Submission, 17 December 2002, Schedule 2.

Goldfields Gas Pipeline actual and forecast contracted capacity and throughput (information submitted March 2004)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	Actual				Forecast					
Total Contracted Capacity (MDQ, TJ/day)	109.7	111.3	109.4	106.0	104.0	103.3	102.5	102.9	103.9	99.1
Total Throughput (TJ/day)	81.4	82.9	82.2	83.3	83.2	82.6	82.0	82.3	83.1	79.3

403. The Authority sought to obtain data from Users to verify the actual and forecast data provided by GGT. However, insufficient data was provided by Users for this purpose. However, together with information provided by GGT the data provided by Users enabled the Authority to make a number of observations about the forecasts provided by GGT.

- GGT's forecasts of contracted capacity are based on current contracts with Users and GGT has not attempted to make forecasts beyond the current contracts, with the exception of some minor forecast growth in contracted MDQ for two Users.
- For several Users, GGT's forecasts for gas throughput are substantially less than forecasts of throughput made by Users themselves.
- Actual throughput for the years 2000 to 2003 has exceeded GGT's previous forecasts for these years by amounts of greater than 10 percent.

404. Notwithstanding the absence of consideration of long-term prospects for the gas market in the forecasts, the forecasts provided by GGT suggest a market for gas transmission that is relatively stable over the period 2000 to 2009. Given the absence of sufficient data available to the Authority (reflecting some Users not having provided forecasts) to enable a revision of these forecasts according to expectations of Users, the Authority is prepared to accept the forecasts provided by GGT for the purposes of this Amended Draft Decision.

405. The Authority has re-calculated the Reference Tariff corresponding to the revised calculations of Total Revenue as set out in the previous section of this Amended Draft Decision. The same tariff structure and tariff-calculation methodology as proposed by GGT in its submission of 17 December 2002 was used by the Authority for determination of tariff charges on the basis of the assumption that all Users pay the same tariff charges regardless of contract duration. In addition, the Authority has taken into account the perceived intent of GGT to maintain a scale of charges according to the duration of the Service Agreement with the User, and has calculated this scale of charges on the basis of the actual durations of existing contracts.

406. Consistent with considerations of possible Access Arrangement Periods as set out in this Amended Draft Decision (paragraph 676 and following), the Authority determined the Reference Tariffs that would apply for the six year period of 1 January 2000 to 31 December 2005 and the ten year period of 1 January 2000 to 31 December 2009 based upon the Authority's analysis as to the requirements of the Code.

407. The Reference Tariff charges are as follows together with an indicative tariff for gas transmission to "Kalgoorlie South" shown for each case.

Reference Tariff determined by the Authority
(Dollar values as at 1 January 2000, excluding GST)

Contract Duration	Toll ($/GJ of Contracted MDQ)	Capacity Reservation ($/GJ of Contracted MDQ/km)	Throughput ($/GJ km of Throughput/km)	Indicative Tariff at Kalgoorlie ($/GJ, 85% load factor)
Access Arrangement Period of 6 years: 1 January 2000 to 31 December 2005				
1 – 5 years	0.238058	0.001372	0.000402	3.06
6 – 10 years	0.218220	0.001257	0.000368	2.80
11 – 15 years	0.208301	0.001200	0.000352	2.68
16 – 20 years	0.198382	0.001143	0.000335	2.55
Access Arrangement Period of 10 years: 1 January 2000 to 31 December 2009				
1 – 5 years	0.229753	0.001322	0.000384	2.94
6 – 10 years	0.210607	0.001212	0.000352	2.70
11 – 15 years	0.201034	0.001157	0.000336	2.58
16 – 20 years	0.191460	0.001102	0.000320	2.45

408. It follows from the above analysis that the Reference Tariff proposed by GGT does not conform to the principles of the Code.

Reference Tariff Variation and Incentive Mechanisms

409. The Code addresses variation in Reference Tariffs within an Access Arrangement Period in two respects:

- variation in Reference Tariffs according to principles such as a predetermined price path or realised cost and sales outcomes for the Service Provider; and
- variation in Reference Tariffs according to an Incentive Mechanism.

410. Provisions of the Code relevant to variation in Reference Tariffs within an Access Arrangement Period are set out below.

411. Section 8.3 of the Code provides for the Service Provider to have discretion as to the manner in which Reference Tariffs vary within an Access Arrangement Period:

> 8.3 Subject to section 8.3A and to the Relevant Regulator being satisfied that it is consistent with the objectives contained in section 8.1, the manner in which a Reference Tariff may vary within an Access Arrangement Period through the implementation of a Reference Tariff Policy is within the discretion of the Service Provider. For example, the Reference Tariff Policy may specify that Reference Tariffs will vary within an Access Arrangement Period through the implementation of:
>
> (a) a Cost of Service Approach;
>
> (b) a Price Path Approach;

(c) a Reference Tariff Control Formula Approach;

(d) a Trigger Event Adjustment Approach; or

(e) any variation or combination of the above.

412. The different approaches are defined in section 10.8 of the Code as follows.

> **Cost of Service Approach** means a Reference Tariff Variation Method whereby initial Reference Tariffs are set on the basis of the anticipated costs of providing the Reference Services and are adjusted continuously in light of actual outcomes (such as sales volumes and actual costs) to ensure that the Reference Tariffs recover the actual costs of providing the Reference Services.
>
> **Reference Tariff Control Formula Approach** means a Reference Tariff Variation Method whereby an initial set of Reference Tariffs may vary over the Access Arrangement Period in accordance with a specified formula or process.
>
> **Price Path Approach** means a Reference Tariff Variation Method whereby Reference Tariffs are determined in advance for the Access Arrangement Period to follow a path or paths over time forecast to deliver a revenue stream, with that price path or paths not being adjusted to account for subsequent events until the commencement of the next Access Arrangement Period.
>
> **Trigger Event Adjustment Approach** means a Reference Tariff Variation Method whereby Reference Tariffs are varied in the manner specified in a Reference Tariff Policy upon the occurrence of a Specified Event.

413. Sections 8.3A to 8.3H of the Code contain further provisions on implementation of an Approved Reference Tariff Variation Method.

> 8.3A A Reference Tariff may vary within an Access Arrangement Period only through implementation of the Approved Reference Tariff Variation Method as provided for in sections 8.3B to 8.3H.
>
> 8.3B (a) If a Specified Event occurs the Service Provider must, within the time provided for in the Reference Tariff Policy, provide a notice to the Relevant Regulator containing the information set out in section 8.3C.
>
> (b) If the Service Provider otherwise wishes to vary a Reference Tariff in accordance with the Approved Reference Tariff Variation Method, the Service Provider must provide a notice to the Relevant Regulator containing the information set out in section 8.3C.
>
> 8.3C The Service Provider's notice under section 8.3B must contain:
>
> (a) the Service Provider's proposed variations to the Reference Tariff and the proposed effective date for those variations; and
>
> (b) an explanation of how the variations proposed are consistent with the Approved Reference Tariff Variation Method contained in the Reference Tariff Policy.
>
> Notwithstanding any other section of the Code, the Relevant Regulator must make public, and must provide the Code Registrar with a copy of, any information provided under paragraphs (a) and (b) above.
>
> 8.3D Unless the Relevant Regulator has disallowed the variation under section 8.3E, the Reference Tariff will be varied automatically on and from the later of:
>
> (a) the date specified in a notice from the Service Provider given in accordance with section 8.3B;
>
> (b) (i) if the Reference Tariff Policy specifies a minimum notice period for the variation, the expiry of that period after the date of the notice from the Service Provider given in accordance with section 8.3B; or

(ii) if the Reference Tariff Policy does not specify a minimum notice period for the variation, 35 days after the date of the notice from the Service Provider given in accordance with section 8.3B,

but if, before the end of the relevant period in paragraph (i) or (ii) above, the Relevant Regulator notifies the Service Provider that it requires additional information from the Service Provider, which the Relevant Regulator has reason to believe may assist the Relevant Regulator to determine whether the variations proposed are consistent with the Approved Reference Tariff Variation Method, the relevant period will be extended by the number of days commencing on the day on which the Relevant Regulator gave notice to the Service Provider and ending on the day on which the Relevant Regulator receives the additional information from the Service Provider.

8.3E The Relevant Regulator may, by notice to the Service Provider before the variation is due to come into effect under section 8.3D, disallow a variation of a Reference Tariff. The Relevant Regulator may disallow a variation only if the Relevant Regulator considers, on reasonable grounds, that the proposed variation is inconsistent with, or not permitted under, the Approved Reference Tariff Variation Method. If the Relevant Regulator disallows a variation because it considers that it is inconsistent with, or not permitted under, the Approved Reference Tariff Variation Method, the Relevant Regulator may specify a variation that is consistent with the Approved Reference Tariff Variation Method. Any such variation comes into effect on the date determined in accordance with section 8.3D.

8.3F The Relevant Regulator must publish its reasons for:

(a) allowing a variation of a Reference Tariff (including if the variation is allowed because of the effluxion of time under section 8.3D);

(b) disallowing a variation of a Reference Tariff; or

(c) specifying any variation specified by the Relevant Regulator under section 8.3E,

at the time of allowing, disallowing or specifying that variation.

8.3G If a Specified Event occurs and the Service Provider does not serve a notice on the Relevant Regulator as required by section 8.3B(a), then the Relevant Regulator may itself vary the Reference Tariff concerned but only in accordance with the Approved Reference Tariff Variation Method. Any such variation comes into effect on the date specified in, or determined in accordance with, the Access Arrangement. The Relevant Regulator must publish its reasons for any variation of the Reference Tariff made under this section 8.3G at the time of making that variation.

8.3H The Relevant Regulator may:

(a) on application by the Service Provider, grant extensions to any time period in sections 8.3B to 8.3G that applies to the Service Provider; and

(b) extend any time period in section 8.3G that applies to the Relevant Regulator.

414. Sections 8.44 to 8.46 of the Code set out the principles for establishing an Incentive Mechanism within the Reference Tariff Policy and the objectives that the Incentive Mechanism should seek to meet.

415. Section 8.44 of the Code states that a Reference Tariff Policy should, wherever the Relevant Regulator considers appropriate, contain a mechanism that permits the Service Provider to retain all, or a share of any returns to the Service Provider from the sale of a Reference Service during an Access Arrangement Period that exceeds the level of returns expected at the beginning of the Access Arrangement Period (an "**Incentive Mechanism**"), particularly where the additional returns are attributable (at least in part) to the efforts of the Service Provider. Such additional returns may result,

amongst other things, from lower Non Capital Costs or greater sales of Services than forecast.

416. Section 8.45 of the Code provides that an Incentive Mechanism may include (but is not limited to) the following:

(a) specifying the Reference Tariff that will apply during each year of the Access Arrangement Period based on forecasts of all relevant variables (and which may assume that the Service Provider can achieve defined efficiency gains) regardless of the realised values for those variables;

(b) specifying a target for revenue from the sale of all Services provided by means of the Covered Pipeline, and specifying that a certain proportion of any revenue received in excess of that target shall be retained by the Service Provider and that the remainder must be used to reduce the Tariffs for all Services provided by means of the Covered Pipeline (or to provide a rebate to Users of the Covered Pipeline); and

(c) a rebate mechanism for Rebatable Services pursuant to section 8.40 that provides for less than a full rebate of revenues from the Rebatable Services to the Users of the Reference Service.

417. Section 8.46 of the Code states that an Incentive Mechanism should be designed with a view to achieving the following objectives:

(a) to provide the Service Provider with an incentive to increase the volume of sales of all Services, but to avoid providing an artificial incentive to favour the sale of one Service over another;

(b) to provide the Service Provider with an incentive to minimise the overall costs attributable to providing those Services, consistent with the safe and reliable provision of such Services;

(c) to provide the Service Provider with an incentive to develop new Services in response to the needs of the market for Services;

(d) to provide the Service Provider with an incentive to undertake only prudent New Facilities Investment and to incur only prudent Non Capital Costs, and for this incentive to be taken into account when determining the prudence of New Facilities Investment and Non Capital Costs for the purposes of sections 8.16(a) and 8.37; and

(e) to ensure that Users and Prospective Users gain from increased efficiency, innovation and volume of sales (but not necessarily in the Access Arrangement Period during which such increased efficiency, innovation or volume of sales occur).

418. In the proposed Access Arrangement submitted on 15 December 1999, GGT proposed a Reference Tariff that is the same as the tariff established under the State Agreement and applied from 1 January 2000 (the A4 Tariff), and proposed that the charges of this tariff continue to be fully escalated for inflation, through quarterly adjustments. The formula for adjustment of charges is contained in clause 9.8 of the General Terms and Conditions. This formula, with a correction as subsequently submitted, is as follows:

$$C_t = C_b \times \frac{CPI_{t-2}}{CPI_b}$$

C_t is the relevant charge in the quarter ***t*** in which the Billing Period occurs;

C_b is the relevant charge applicable at the date of Service Agreement;

CPI_{t-2} is the Consumer Price Index (CPI) for the quarter ended three months prior to the commencement of quarter ***t***; and

CPI_{b} is the base CPI, and is 120.2.

419. The Authority understands that GGT's proposed Reference Tariff, presented in section 7.5.3.10 of the Access Arrangement Information, is expressed in dollar values at 1 October 1997, and that the "base CPI" of 120.2 is the June 1997 quarter CPI of the Australian Bureau of Statistics for the All Groups Weighted Average of Eight Capital Cities.[93]

420. Incentive structures are addressed in section 7.6 of the Access Arrangement Information of 15 December 1999. GGT has proposed a "price path" approach to the specification of the Reference Tariff, where the tariff is set in advance for the entire Access Arrangement Period on the basis of anticipated revenues and costs. GGT indicates that it considers that these revenues and costs constitute a benchmark for performance, and that if GGT's performance is better than anticipated, its returns will be improved, if not, they will decline.

421. In its submission of 17 December 2002, GGT did not explicitly address the escalation of tariff charges for inflation. An objective of full escalation for inflation on an annual (rather than quarterly) basis is, however, implied by the tariff model presented as Schedule 2 of this submission.

422. The Authority notes that GGT's proposed price path approach in specification of the Reference Tariff is, in effect, a "CPI-X" provision for tariff variation with the "X factor" equal to zero.

423. Australian regulatory decisions under the Code have generally not used tariff escalation mechanisms such as CPI–X price caps as "incentive mechanisms" per se, i.e. to provide incentives for cost reduction. While the mechanisms for annual tariff variation have for most Access Arrangements involved CPI-X constraints on annual tariff variations, the value of "X" has typically not reflected productivity improvements beyond those already forecast by the Service Provider and incorporated into cost and demand forecasts. Rather, the X value has been derived as a means of achieving "glide paths" for tariffs so that there is a smooth path of tariff changes over an Access Arrangement Period while preserving the present value of a target revenue stream.

424. The Incentive Mechanism of a tariff path as proposed by GGT arises from the prospect of GGT capturing, over the remainder of an Access Arrangement Period, the benefits of cost reductions or demand growth that were not forecast at the time of

[93] CPI is defined by GGT in the proposed Access Arrangement Appendix 1, p2 as: "…the Consumer Price Index (All Groups Weighted Average of Eight Capital Cities) as published by the Australian Bureau of Statistics for any Quarter and if such Index ceases to be published, any official replacement index published by the Australian Bureau of Statistics and, in the absence of any official replacement index, an index nominated by GGT which is prepared and published by a government authority or independent third party and which most closely approximates the Consumer Price Index".

approval of the Access Arrangement. The benefits of cost reductions and demand growth may then be passed on to Users in the next Access Arrangement Period.

425. The Authority is therefore of the view that the price path approach taken by GGT in specification of the Reference Tariff, and the Incentive Mechanism inherent in this approach, is in general accordance with the relevant provisions of the Code. However, assuming that the Access Arrangement Period will commence at 1 January 2000, the formula for escalation of charges will require amendment to provide for a correction for the inflationary impact of introduction of the GST (from which GGT is sheltered by itself claiming GST rebates on inputs). To achieve this, and taking into account the implied proposal in GGT's submission of 17 December 2002 of annual rather than quarterly escalation of tariffs, the formula for escalation of the tariff charges requires amendment as follows.

$$C_t = C_{t-1} \times \left(\frac{CPI_{t-1}}{CPI_{t-2}} - X \right)$$

C_t is the relevant charge in the year t ;

C_{t-1} is the relevant charge in the year preceding year t ;

CPI_{t-1} is the Consumer Price Index (CPI) for the September quarter of the year prior to year t ;

CPI_{t-2} is the Consumer Price Index (CPI) for the September quarter of the year two years prior to year t ; and

X is 0.0275 when t is the year 2001 and is zero otherwise.

Terms and Conditions

Requirements of the Code

426. Section 3.6 of the Code requires that:

> 3.6 An Access Arrangement must include the terms and conditions on which the Service Provider will supply each Reference Service. The terms and conditions included must, in the Relevant Regulator's opinion, be reasonable.

Access Arrangement Proposal

427. GGT addresses the requirement for terms and conditions in section 8 of the proposed Access Arrangement.

428. Clause 8.1 of the proposed Access Arrangement indicates that the terms and conditions on which the Reference Service will be provided comprise the terms and conditions contained in:

> (a) the executed and accepted Order Form;

(b) any Conditions that may apply; and

(c) the General Terms and Conditions.

429. The General Terms and Conditions are provided as Appendix 3 of the proposed Access Arrangement.

430. Clause 8.2 of the proposed Access Arrangement allows for provision of a Service to be made conditional on the Prospective User satisfying conditions precedent or conditions subsequent to provision of the Service:

> 8.2 Conditions
>
> (a) GGT may notify a Prospective User that GGT is prepared to make available a Service subject to specified Conditions being satisfied as conditions precedent or observed as conditions subsequent.
>
> (b) The Conditions may relate to any matter reasonably required by GGT to protect or secure its position under any proposed Service Agreement, including:
>
> (1) the occurrence of a defined event including installation and commissioning of Developable Capacity or third party equipment, processing facilities or infrastructure;
>
> (2) a Performance Security being provided by the Prospective User, any of its Related Corporations or any other person on terms acceptable to GGT in order to satisfy the requirements of the request for Service; and
>
> (3) copies of insurance policies or other evidence reasonably required by GGT being provided, which provide reasonable indication to GGT that the Prospective User has insurance policies sufficient to satisfy the indemnities which the Prospective User will be required to provide under the proposed Service Agreement .
>
> (c) Unless the Prospective User notifies GGT to the contrary within 7 Business Days of receiving notice of the Conditions, the Prospective User is deemed to have accepted and agreed to be bound by the Conditions notified by GGT, which will form part of the Service Agreement.

431. Further clauses of section 8 of the proposed Access Arrangement relate to the date on which a Service Agreement comes into effect, the commencement date of application of the Toll and "capacity reservation" components of the Reference Tariff, and provision for resolution of disputes as to terms and conditions.

432. The General Terms and Conditions for provision of the Reference Service are set out in clauses titled as follows.

1 Introduction
2 Agreement To Provide And To Accept Service
3 Term Of Agreement
4 Service
5 Forecasts And Nomination Procedure
6 Connection, Inlet Point And Outlet Points
7 Quantity Variations
8 Interruption Of Service
9 Transportation Tariff And Charges
10 Quality And Delivery Conditions

11 Measurement Of Gas
12 Representations And Warranties Of The User
13 Invoicing And Payment
14 Possession, Responsibility And Title
15 Records And Information
16 Termination
17 Force Majeure
18 Liabilities
19 Insurances
20 Assignment And Transfers Of Capacity
21 Confidential Information
22 Dispute Resolution
23 Arbitration
24 Notices
25 Waiver
26 Entire Agreement
27 Severability
28 Governing Law

First Schedule: Technical Requirements For Inlet Facilities
Second Schedule: Technical Requirements For Outlet Facilities
Third Schedule: Test Procedures
Fourth Schedule: Inlet Gas Specification
Fifth Schedule: Gas Pipeline Services Performance Bond
Sixth Schedule: Statement Of Tariffs And Charges

General Matters in Relation to the Terms and Conditions

433. GGT has submitted that the General Terms and Conditions are substantially the same as those currently offered in relation to third-party access under relevant provisions of the State Agreement. Further, GGT has submitted that it is a relevant consideration for the Authority that the General Terms and Conditions are based upon those established under the State Agreement because such terms and conditions were "established in circumstances which reflect the best possible representation of the interests of both the pipeline's customers and owners [and] have been in operation without serious contention since inception". GGT has also submitted that the Authority should take those circumstances into account in considering "the interest and expectations of the Service Provider and Users".

434. It is incumbent upon the Authority, under the provisions of section 3.6 of the Code, to come to a view on whether the proposed terms and conditions set out in the Access Contract Terms and Conditions are reasonable. Whilst the matters raised by GGT are relevant to the Authority's assessment, the Authority does not consider them to be determinative. Further, the absence of complaints in relation to the terms and conditions of previous or existing contracts or arrangements may not be a complete answer to the question of reasonableness.

435. To come to a view on whether the General Terms and Conditions are reasonable, the Authority has considered the effect of each of the terms and conditions, considered

submissions on the proposed terms and conditions, and taken into account the factors set out in section 2.24 of the Code so far as they are applicable. The Authority's deliberations and views on various clauses of the terms and conditions are indicated below, in the same order as the clauses appear in the General Terms and Conditions.

436. As an initial matter in relation to the General Terms and Conditions, clauses 8.1(b) and 8.2(b) of the proposed Access Arrangement suggest that GGT is able to attach conditions to a Service Agreement for provision of a Reference Service in addition to those terms and conditions set out in the proposed Access Arrangement, including those in Appendix 3 of the proposed Access Arrangement, which are the applicable General Terms and Conditions.

437. A submission was made to the Authority that this discretionary provision for GGT to attach additional conditions to Service Agreements for the provision of the Firm Service which are over and above those stated in the Access Arrangement is inconsistent with the requirements of section 3.6 of the Code.

438. Clause 8.2 of the proposed Access Arrangement provides for GGT to establish conditions precedent and conditions subsequent that must be satisfied by a User entering into a Service Agreement. Clause 8.2(b) indicates that these conditions are conditions on a User and GGT entering into a Service Agreement rather than being terms and conditions for provision of the Service, per se. However, clause 8.2(c) of the Access Agreement Terms and Conditions states that the Conditions in clause 8.2 will form part of the Services Agreement, which is defined in Appendix 1 of the proposed Access Arrangement as the agreement for the provision of a Reference Service.

439. In the Authority's view, section 3.6 of the Code implies that any terms and conditions for provision of a Reference Service will be stated in the terms and conditions for that Reference Service that comprise part of the Access Arrangement and are not a matter for future determination, and that the reasonableness or otherwise of those conditions will be a matter for the Authority to assess. Accordingly, the Authority considers that clause 8.2(b) of the proposed Access Arrangement is inconsistent with the requirements of the Code.

440. Clause 8.1 of the proposed Access Arrangement provides for the terms and conditions on which the Reference Service is to be provided to include conditions contained in the accepted Order Form (which is the Order Form contained in Appendix 2.2 of the proposed Access Arrangement), any conditions established under clause 8.2 of the proposed Access Arrangement and the General Terms and Conditions.

441. The Order Form gives effect to the terms in clauses 6.4(d), 6.5(e), 6.5(f), 6.6(b)(2) and 8.1 of the Access Arrangement. In this way, the Order Form is an extension of these clauses. The Order Form makes provision for the setting of conditions in relation to provision of documents by the User as evidence of the User's legal status, legal capacity, creditworthiness, and access to gas supplies; indication by the User of willingness to meet investigation costs; and indication by the User of willingness to meet developable-capacity costs. The only new condition (which is not already specified in the proposed Access Arrangement terms) is that the Order Form by itself is a warranty by a User that all the information provided to GGT relating to:

- any Enquiry Form;
- the Order Form;
- the satisfaction of any Conditions; or
- under or for the purposes of a Service Agreement,

is true and accurate and not misleading in a material way.[94]

442. Accordingly, the Authority is satisfied that clause 8.1 of the proposed Access Arrangement is a reasonable requirement.

443. Attention is now given to particular elements of the General Terms and Conditions.

Term of Agreement

444. Clause 3 of the General Terms and Conditions sets out the period of a Service Agreement between GGT and a User for the provision of a Reference Service. It also provides for related matters, including the effect of the timing of additions or enhancements of the pipeline on the commencement of the Service, and termination of the Service Agreement in the event of a User failing to lodge a bond.

445. The Authority has a single concern in respect of clause 3.2 of the General Terms and Conditions which relates to the effects on a Service Agreement of a delay in additions or enhancements to the pipeline necessary to provide the relevant Service.

446. Clause 3.2(d) of the General Terms and Conditions provides for GGT or a User to unilaterally terminate a Service Agreement where:

- any additions or enhancements to the GGP which are required to provide the Service are not operational following the expiry of 12 months from the Commencement Date ; and
- the parties cannot agree, within 30 days of the expiry of that 12 month period, to either defer the Commencement Date or reduce the scope of the Service.

447. The Authority is of the view that the effect of clause 3.2 is to unreasonably prevent a User from accessing mechanisms of dispute resolution in the event that GGT fails to make enhancement to the GGP operational within the period of 12 months from the Commencement Date.

448. GGT has submitted to the Authority that:

- clause 22.1 of the General Terms and Conditions provides for the parties, in the circumstances to which clause 3.2(d) applies, to have recourse to a dispute resolution procedure; and

[94] Clause 21 – Appendix 2.2 Access Agreement.

- a User would have 13 months to refer a relevant matter to dispute resolution before GGT could unilaterally terminate the Service Agreement, and once a User had referred the matter to dispute resolution, clause 22.5 of the General Terms and Conditions would prevent GGT from unilaterally terminating the Service Agreements pending resolution of the dispute.

449. Notwithstanding GGT's submission, recourse to dispute resolution does not appear to be available under clause 22 of the General Terms and Conditions, once a Service Agreement has been terminated as there would be no agreement upon which the clause could operate. Therefore, the dispute resolution procedure would be unavailable to a User once GGT had unilaterally terminated the Service Agreement pursuant to clause 3.2 of the General Terms and Conditions.

450. Moreover, a User would not in practice have 13 months within which to refer a dispute regarding clause 3.2(d) for resolution pursuant to clause 22 of the General Terms and Conditions. Pursuant to clause 3 of the General Terms and Conditions, GGT is entitled to the full 12 month period to make the additions or enhancements to the pipeline. It may not become clear to a User that such additions or enhancements will not be made within the 12 month period until very shortly before or after the expiry of that period. The time frame of 30 days after the expiry of 12 months provided in clause 3.2(d) (after which GGT may terminate the Service Agreement) may also be insufficient time to proceed with the dispute resolution procedure in clause 22.

451. For these reasons, the Authority considers that the provision under clause 3.2(d) of the General Terms and Conditions for GGT to unilaterally terminate the Service Agreement is not reasonable.

Reference Service

452. Clause 4 of the General Terms and Conditions provides a general description of the Reference Service, indicating (in clause 4.3) that the Service provided to a particular User is defined by specification of Inlet Point, Outlet Point(s), maximum daily quantity (MDQ) and maximum hourly quantity (MHQ).

453. Clause 4.4 provides for a User to temporarily transport gas in excess of its MDQ by securing from GGT a Supplementary Quantity Option, which may be provided at GGT's sole discretion and under which gas is transported on an interruptible basis. Where there are multiple requests for Supplementary Quantity Options, GGT will meet the requests on a priority set by the time and date of the "SQO Nomination Form".

454. The Authority received submissions questioning whether GGT should be able to offer the Supplementary Quantity Options solely at its discretion and whether the terms for provision of the Supplementary Quantity Option are reasonable.

455. It appears to the Authority that the intent of the Supplementary Quantity Option is to take advantage of a short-term ability in the pipeline system to deliver gas in excess of contracted capacity, which is dependent upon the system transient conditions created by linepack dynamic, gas receipts and gas deliveries. In this regard, the Supplementary Quantity Option is in the nature of a "spot" Service or "authorised

overrun" Service, which is provided utilising capacity that becomes available according to seasonal conditions, spare compressor power and, to some extent, other Users' unutilised capacity. Given the nature of the Supplementary Quantity Option, the Authority considers provision at the discretion of GGT to be reasonable.

456. The Supplementary Quantity Option is a component of the Reference Service, notwithstanding that GGT could have opted to define it as a distinct Service. There are no separate terms and conditions for the Supplementary Quantity Option, other than the description of the facility as set out in clause 4.4 of the General Terms and Conditions and the specification of the price in clause 4 of the Sixth Schedule to the General Terms and Conditions.

Forecasts and Nomination Procedure

457. Clause 5 of the General Terms and Conditions specifies requirements on Users to provide GGT with annual forecasts for gas deliveries, and to make monthly nominations of gas deliveries. Clause 5 also provides for GGT to inform Users of gas imbalances, and for Users to trade imbalances. None of the submissions received by the Authority addressed these provisions and the Authority has no reason to consider the provisions to be unreasonable.

Connection, Inlet Point and Outlet Points

458. Clause 6 of the General Terms and Conditions relates to connection of a User's facilities to the GGP, and to Inlet Points and Outlet Points. Submissions made to the Authority raised concerns as to provisions of the clause relating to ownership of Outlet Points, and to changes in Outlet Points.

459. Clause 6.4 relates to Outlet Points and explicitly provides (under clause 6.4(b)) for Outlet Points to be owned and maintained by a third party.

460. Clause 6.6(a) of the General Terms and Conditions requires a User to procure for GGT an exclusive right to operate and control the Outlet Facilities, except where these are owned and maintained by a third party in accordance with clause 6.4(b) of the General Terms and Conditions. Where Outlet Facilities are owned and maintained by a third party, the provisions of clause 6.4(b) of the General Terms and Conditions apply as follows.

- The User provides GGT with access to the Outlet Point for the purposes of the Service Agreement.
- The User provides connections for SCADA and communications equipment acceptable to GGT to enable it to monitor the functioning and operation of the Outlet Facilities.
- The User ensures that the third party maintains adequate insurance to an amount approved by GGT.
- The User pays a connection charge in respect of the Outlet Point.

461. A submission made to the Authority questioned why the proposed Access Arrangement should not allow Outlet Facilities to be able to be owned by a User as well as either the Service Provider or a third party. In response to this issue, GGT submitted that Users comprise third-parties within the context of clause 6.4 of the General Terms and Conditions and thereby are permitted to own Outlet Points.

462. The Authority interprets clauses 6.4 and 6.6 of the General Terms and Conditions as providing for Outlet Points to be owned by a third party as something separate from, and in addition to, ownership by the User. There is no specific reference to ownership of Outlet Points by Users, nor any indication that Users are deemed to be third parties for the purposes of these clauses. It is the view of the Authority that it would be reasonable, for the purposes of clarity, for the General Terms and Conditions to make specific provision for ownership of Outlet Points by Users.

463. Also in relation to the ownership of Outlet Points, clause 6.4 of the General Terms and Conditions and the Second Schedule to the General Terms and Conditions require that a User must provide GGT with such spare parts and components as GGT from time to time considers necessary for the effective maintenance of the Outlet Point facilities. The Authority considers this requirement to be reasonable only where the Outlet Point facilities are owned by the User.

464. Clause 6.9 of the General Terms and Conditions provides for a User to change the Outlet Point pertaining to an Access Agreement, subject to a number of constraints and contractual requirements.

465. A submission was made to the Authority requesting that the Authority consider whether it is fair for the User to pay total aggregate charges no less than their existing commitments (with respect to Capacity Reservation and Toll Charges) if the User changes Outlet Points. For example, the Authority was asked to consider whether it is fair for a User to be required to pay such charges where the User changes to an Outlet Point upstream for which lower charges could apply (assuming a new Service Agreement was entered into).

466. This situation is specifically contemplated by section 3.10 and 3.11 of the Code, in relation to the Trading Policy of an Access Arrangement, as follows.

> 3.10 The Trading Policy must comply with the following principles:
>
> …
>
> (c) Where commercially and technically reasonable, a User must be permitted to change the Delivery Point or Receipt Point from that specified in any contract for the relevant Service with the prior written consent of the Service Provider. The Service Provider may withhold its consent only on reasonable commercial or technical grounds and may make its consent subject to conditions only if they are reasonable on commercial and technical grounds. The Trading Policy may specify conditions in advance under which consent will or will not be given and conditions that must be adhered to as a condition of consent being given.
>
> 3.11 Examples of things that would be reasonable for the purposes of section 3.10(b) and (c) are:
>
> (a) the Service Provider refusing to agree to a User's request to change its Delivery Point where a reduction in the amount of the Service provided to the original Delivery Point will not result in a corresponding increase in the Service Provider's ability to provide that Service to the alternative Delivery Point; and

(b) the Service Provider specifying that, as a condition of its agreement to a change in the Delivery Point or Receipt Point, the Service Provider must receive the same amount of revenue it would have received before the change.

467. As the relevant provision of clause 6.9 of the General Terms and Conditions is specifically allowed under the Code, the Authority is not in a position to find the provision unreasonable. Moreover, regardless of the relevant provisions of the Code, the Authority considers that the relevant provision of clause 6.9 is reasonable for protection of the interests of GGT under existing Service Agreements, taking into account that GGT may make certain investments to service an Outlet Point and the protection of the interests under the Service Agreement may have been necessary for this investment to have taken place.

Quantity Variations and Charges

468. Clause 7 of the General Terms and Conditions relates to “quantity variations” and establishes limits on gas imbalances, daily overrun, hourly overrun, and variation from nominations. Clause 7 also makes provision, where the limits are exceeded, for Users to incur “quantity variation charges” that are in addition to the Reference Tariff. Clause 9 of the General Terms and Conditions (*Transport Tariff and Charges*) makes explicit provision for levying of these charges on Users.

469. The quantity variation charges provided for under clause 7 are specified in clause 5 of the Sixth Schedule to the General Terms and Conditions, and comprise:

- Accumulated Imbalance Charge;
- Daily Overrun Charge;
- Hourly Overrun Charge; and
- Variance Charge.

470. The Quantity Variation Charges may be applied or waived solely at GGT’s discretion. The waiver of a Quantity Variation Charge in any particular circumstance is not regarded by GGT as a precedent for waiver of such charges in future circumstances.

471. The Accumulated Imbalance Charge may be levied on the User where the accumulated imbalance for that User is in excess of an “Accumulated Imbalance Tolerance”, which is the greater of 8 percent of the User’s MDQ or 1 TJ/day. The Accumulated Imbalance Charge is a charge of $2.50 per GJ of accumulated imbalance adjusted by the CPI in accordance with clause 9.8 of the General Terms and Conditions, and may be varied by GGT through notice in writing to all Users.

472. The Daily Overrun Charge may be levied on the User when the daily quantity of gas received at the Inlet Point is greater than the User's MDQ, and/or the daily quantity of gas delivered at the Outlet Point is greater than the User's MDQ. The Daily Overrun Charge is determined as 350 percent of the total transmission charge that would normally be payable for gas delivery to the relevant Outlet Point.

473. The Hourly Overrun Charge may be levied on the User when the hourly quantity of gas received at the Inlet Point is greater than the User's MHQ (calculated as

120 percent of 1/24 of the User's MDQ), and/or the hourly quantity of gas delivered at the Outlet Point is greater than the User's MHQ. The Hourly Overrun Charge is determined as 350 percent of the total transmission charge that would normally be payable for gas delivery to the relevant Outlet Point.

474. The Variance Charge may be levied on the User where the daily quantity of gas received at the Inlet Point is less than or greater than the User's nomination for the Inlet Point and/or the daily quantity of gas delivered at the Outlet Point is less than or greater than the User's nomination for the Outlet Point, and this "Variance Quantity" is in excess of a "Variance Tolerance", which is the greater of 8 percent of the User's MDQ or 1 TJ/day. The Variance Charge is determined as 200 percent of the total transmission charge that would normally be payable for gas delivery to the relevant Outlet Point.

475. The Authority has considered several issues in relation to the provisions for Quantity Variation Charges:

- whether, for a Reference Service established under an Access Arrangement, the Quantity Variation Charges may be imposed;
- the magnitude of the Quantity Variation Charges;
- the proposed provision for GGT to change the value of Quantity Variation Charges by notice to Users;
- the disposition of revenue from imposition of the Quantity Variation Charges;
- the features and application of each Quantity Variation Charge; and
- the information available to Users for Users to assess potential liability for the Quantity Variation Charges.

476. The matter of whether charges in the nature of the Quantity Variation Charge can be imposed on Users of a Reference Service was a matter addressed by the Regulator in the Regulator's Final Decision on the proposed Access Arrangement for the DBNGP.[95] In this decision, the Regulator considered the charges to be reasonable only if their application was limited to circumstances where actual pecuniary loss or damage occurs, or there is a significant risk to the integrity of the pipeline.

477. The Authority notes that the provisions for imposition of Quantity Variation Charges for the GGP explicitly provide for GGT to have discretion in the imposition of the charges. However, no information is provided on the exercise of this discretion.

478. The Authority considers that the provisions for imposition of Quantity Variation Charges are reasonable only to the extent that they are limited in application and effect to the imposition of a charge upon Users in the event that specific conduct engaged in by Users causes actual pecuniary loss or damage or exposes the pipeline to

[95] Independent Gas Pipelines Access Regulator Western Australia, 18 November 2003, Supplementary Reasons and Amendment, Final Decision on the proposed Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline.

a significant risk (whether or not that risk becomes manifest) that threatens the integrity of the pipeline. Accordingly, the Authority considers that discretion to impose a charge beyond these circumstances (as provided for under the General Terms and Conditions) is unreasonable.

479. In relation to the magnitude of the Quantity Variation Charges, the Authority also maintains the position of the Regulator in respect of the Access Arrangement for the DBNGP, that common industry practice should serve as a guide in setting the value of the charges, taking into account that the consequences of the conduct that will attract the charges are almost impossible to pre-estimate.

480. Comparable charge rates for other Australian transmission pipelines regulated under the Code are as follows.

Magnitudes of Charges for Quantity Variation under Approved Access Arrangements for Transmission Pipelines

Pipeline	Penalised Action[96]	Penalty Charge as multiple of Relevant Reference Tariff
Amadeus Basin to Darwin (N.T. Gas Pty Ltd)	Daily Overrun	1
	Accumulated Imbalance*	2.5
	Variance	1.2
Central West Pipeline (AGL Pipelines (NSW) Pty Ltd)	Daily Overrun	1
	Accumulated Imbalance*	2.5
	Variance	0.2
Moomba to Sydney Pipeline (East Australian Pipeline Ltd)	Daily Overrun	2.0 to 3.5
	Variance	1.2
Moomba to Adelaide Pipeline (Epic Energy)	Accumulated Imbalance	0.74 (approx.)
	Variance	0.74
Tubridgi Pipeline System (Tubridgi Parties)	Daily Overrun	0.56
Dampier to Bunbury Natural Gas Pipeline (Epic Energy)	Hourly Overrun	3.5
	Daily Overrun	1.1
	Accumulated Imbalance	3.5
	Variance	3.5

* Applies only where contracted pipeline capacity is in excess of 85 percent of total pipeline capacity.

481. Taking into account this comparison, the Authority is satisfied that the levels of Quantity Variation Charges proposed by GGT are consistent with charges applicable in respect of other pipelines in Australia, albeit at the upper end of the range of values, and on that basis the magnitude of the charges is considered reasonable.

482. In regard to the disposition of revenue gained from imposition of Quantity Variation Charges, the Authority takes the view that it would be unreasonable for GGT to retain the revenue as it was not taken into account in the determination of the Reference Tariff. Moreover, retention of the revenue gained from imposition of Quantity Variation Charges is regarded by the Authority as unreasonable for the reason that it would create an incentive for GGT to claim that the charges apply in circumstances where it may not otherwise do so.

[96] For ease of comparison, actions attracting penalties are described by the relevant terms as used in the proposed Access Arrangement for the GGP rather than, necessarily, the terms used in the Access Arrangement for the relevant pipeline.

483. The Authority notes that there are at least three other Australian transmission pipelines regulated under the Code where the actual or proposed practice is that revenues gained by imbalance and/or overrun penalties are rebatable to Users, and that rebate provisions were an initiative of the Service Provider rather than imposed by the relevant regulator.[97] This is contrary to a submission from GGT indicating that rebate of revenues from penalty charges has not been general practice by industry.

484. On the issue of the ability of GGT to change Quantity Variation Charges during the Access Arrangement Period, the Authority notes that clause 7 of the General Terms and Conditions and clause 5 of the Sixth Schedule to the General Terms and Conditions include provision for GGT, by providing notice to Users, to unilaterally change the tolerance limits applicable to the Accumulated Imbalance Charge and Variance Charge, and the rates of Quantity Variation Charges.

485. The Authority considers that a change in the rates of the Quantity Variation Charges would comprise a change to the General Terms and Conditions and consequently to the Access Arrangement. Taking into account that an Access Arrangement may only be changed or revised through the process set out in section 2 of the Code, and that this process does not contemplate changes or revisions being implemented unilaterally by a Service Provider, the Authority is of the view that the proposed provisions for change in the rates of the Quantity Variation Charges are not permissible under the Code.

486. The characteristics of each of the proposed Quantity Variation Charges are now considered.

487. Taking first the Accumulated Imbalance Charge, GGT has proposed that, if at the end of any gas day the absolute value of the Accumulated Imbalance is greater than the Accumulated Imbalance Tolerance, GGT may at its discretion require the User to pay an Accumulated Imbalance Charge. The Accumulated Imbalance is the arithmetic sum of all Daily Imbalances corrected for any adjustments made by trading of gas imbalances or purchase or sale of gas to correct gas imbalances.

488. At the conclusion of the term of the Service Agreement, the Accumulated Imbalance must be set to zero. If this is not done, GGT will set the Accumulated Imbalance to zero by purchasing or selling gas. Similarly, if a User is liable for an Accumulated Imbalance Charge for seven or more consecutive “Gas Days”, the User must agree to GGT purchasing or selling gas on the User’s behalf to set the Accumulated Imbalance to zero.

489. In the event that GGT purchases gas to set a User’s Accumulated Imbalance to zero, the User will be invoiced for the gas at twice the prevailing “Used Gas” price. If GGT sells gas to set a User’s Accumulated Imbalance to zero, the User will be credited for the gas at half the prevailing Used Gas price (General Terms and

[97] East Australian Pipeline Limited, Proposed Access Arrangement for the Moomba to Sydney Pipeline System, 5 May 1999. Epic Energy, Proposed Access Arrangement for the Moomba to Adelaide Pipeline, 1 April 1999, 11 November 1999. Epic Energy, Proposed Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline, 15 December 1999.

Conditions clause 7.2(j)). The gas prices are those reasonably nominated by GGT, which may vary from time to time (clause 7.2(h)).

490. The Authority notes that, where applied, the Accumulated Imbalance Charge is levied against the entire quantity of Accumulated Imbalance and not just the excess over the Accumulated Imbalance Tolerance. This is contrary to common industry practice which is for such a charge to be levied only on quantities that exceed the relevant tolerance.[98]

491. In light of common industry practice, the Authority is of the view that the Accumulated Imbalance Charge proposed by GGT is not reasonable.

492. The Daily Overrun Charge and Hourly Overrun Charge proposed by GGT both operate similarly. Both are calculated as an overrun quantity at an Inlet Point or Outlet Point in excess of the User's MDQ or MHQ, multiplied by 3.5 times the applicable transmission tariff for the User.

493. The Authority notes that the determination of the Daily Overrun and Hourly Overrun Charges for both Inlet Points and Outlet Points potentially causes the User to be penalised twice for the same overrun: once for the overrun at the Inlet Point and once for the overrun at the Outlet Point. Moreover, as an overrun at an Inlet Point would not generally compromise the operation of the pipeline (as it only contributes to pipeline line pack and pressure), in most cases a charge on overrun at an Inlet Point would not be justified by any consequent cost to the pipeline operator or risk to pipeline operation. For this reason, the Authority considers the provision for Quantity Variation Charges to apply to Daily Overrun and Hourly Overrun at Inlet Points to not be reasonable.

494. For the Variance Charge, GGT has proposed that if at the end of any gas day the absolute value of the difference between the actual and nominated volumes of gas received or delivered into or from the pipeline exceeds the Variance Tolerance, GGT may at its discretion require the User to pay the Variance Charge. The Variance Tolerance is the greater of eight percent of the daily nomination or 1 TJ.

495. The Authority notes the importance of nominations in the operation of a transmission pipeline, particularly in efficient operation of the pipeline (management of compressor configuration and line pack) and in efficient utilisation of the pipeline (the possibility of making unutilised pipeline capacity available to Users on a spot or short-term basis). As such, the Authority acknowledges the need to have in place mechanisms to motivate accurate nominations. However, the Authority also recognises that nominations are a forecast by Users of gas delivery, and that in the normal course of events there are valid reasons for actual gas delivery to vary from forecasts that were accurate at the time the nomination was made. Taking this into account, the Authority considers that an unqualified discretion for GGT to impose the Variance Charge is not reasonable. Rather, the Authority considers that the Variance Charge should only be capable of being imposed where a User persistently nominates in a manner inconsistent with a considered forecast of gas delivery.

[98] The Access Arrangements for the following pipelines only charge or propose to only charge in respect of the excess above the tolerance: Moomba to Adelaide Pipeline, Queensland Gas Pipeline and DBNGP.

496. Also with regard to the Variance Charge, the Authority notes that the Variance Charge applies to the difference between the actual gas quantities received or delivered into or from the pipeline and the nominated quantities, rather than the difference that is in excess of the Variance Tolerance. Given the potential difficulty and impracticality of a User exactly matching gas receipt and delivery with nominations, the Authority considers this operation of the Variance Charge to not be reasonable. Rather, the Authority considers that the Variance Charge, where applied, should only apply to the difference between the actual gas quantity received or delivered into or from the pipeline and the nominated quantity that is in excess of the Variance Tolerance.

497. Finally, consideration is given to the availability of information to Users to enable Users to assess potential liability for Quantity Variation Charges. As a general principle, the Authority considers that where the terms and conditions for a Reference Service include provisions for charges of the nature of the Quantity Variation Charges proposed by GGT, the terms and conditions should also provide, to the extent reasonably practicable, for the Service Provider to make information available on a timely basis to Users that enables Users to assess their potential liability for the charges and take action to avoid the charges.

498. GGT has submitted to the Authority that a requirement for GGT to provide information would be unreasonable for the reason that the Authority has no power to impose costs on GGT through requiring particular mechanisms for provision of relevant information.[99] Further, GGT submitted that the requirement is inconsistent with the then Regulator's approval of the Access Arrangement for the Mid-West and South-West Gas Distribution Systems.

499. The Authority agrees with GGT that it would not be appropriate to require GGT to utilise a particular mechanism for provision of information to Users. However, the Authority is of the view that cost-effective mechanisms are available to GGT to achieve timely provision of information so that Users can respond and take actions to avoid the Quantity Variation Charges. Further, while the Authority notes that the Regulator did not impose any requirement on AlintaGas in respect of the Access Arrangement for Mid-West and South-West Gas Distribution Systems, this was because the Access Arrangement for the distribution systems did not include provisions for such charges and the same need for provision of information on a timely basis does not exist.

500. Taking into account the above matters, the Authority takes the view that the provisions of the General Terms and Conditions relating to Quantity Variation Charges are not reasonable in the absence of an obligation on GGT to provide, to the extent practicable, information on a timely basis to Users that enables Users to assess their potential liability to the charges and take action to avoid the charges.

[99] This submission from GGT responded to the April 2001 Draft Decision wherein the Regulator gave an example of information provision by an electronic bulletin board as a mechanism by which GGT could provide relevant information to Users.

Interruption of Service

501. Clause 8 of the General Terms and Conditions contains provisions relating to interruption of Services, including provisions for interruptions for reasons of pipeline maintenance, emergency or *force majeure*, and then sets out the obligations of GGP in the event of an interruption, including provision to Users of advance notice of interruptions.

502. Clause 8.2 of the General Terms and Conditions provides for GGT to curtail the provision of Services for maintenance purposes. Clause 8.3(b) states that GGT will use "all reasonable endeavours to inform Users" but does not indicate a specified notice period that must be given.

503. The interruption of Services has adverse effects upon Users. These effects may be reduced if Users have advance notice of interruptions. Where planned maintenance of the GGP is being conducted, the Authority expects that GGT would know well in advance whether an interruption of Services is likely to occur. The Authority considers that it is not reasonable that the General Terms and Conditions do not make explicit provision for GGT to give advance notice to Users of any interruptions that may occur as a consequence of planned maintenance activities.

504. More generally in relation to interruptions, several submissions made to the Authority suggested that the proposed Access Arrangement should be amended to include a specified "reliability level" or "reliability index" for the Reference Service, and that it should include a provision for the reduction of fixed charges in the event of an interruption or reduction in the provision of the Reference Service. Further, it was submitted that issues such as notification of the performance of GGT against the reliability index and an ability to continuously track performance should be considered.

505. GGT submitted that the operating costs contained in the proposed Access Arrangement reflect the current operating costs and practices and that any increase in current levels of reliability may result in an increase in operating costs and therefore an increase in the Reference Tariffs. Further, GGT submitted that any User which required any particular reliability features could seek to negotiate the terms of such a Service with GGT.

506. It is the view of the Authority that for a Reference Service described as a "firm service", it is unreasonable for the General Terms and Conditions to not provide some guarantee of supply with a corresponding reduction in fixed charges if this guarantee is not met. However, while the Authority is of the view that there should, ideally, be some specification of reliability included in a proposed Access Arrangement, it may be technically difficult to require an amendment to the proposed Access Arrangement to that effect.

507. As such, the Authority considers that the concerns in relation to reliability may best be addressed at this time by requirements for GGT to bear the direct costs of interruptions to the Reference Service through waiving or refunds of relevant charges in most circumstances of interruptions. The Authority deals with the matter of reduction of charges in the event of an interruption of supply in relation to clauses 17 and 18 of the General Terms and Conditions, below.

Transportation Tariff and Charges

508. Clause 9 of the General Terms and Conditions describes the component charges of the Reference Tariff and specifies terms for the payment of these charges. Clause 9 also makes provision for the following matters.

- Charges in addition to the Reference Tariff including a Used Gas Charge; a Supplementary Option Charge; an Account Establishment Charge; a Connection Charge; an Annual Account Management Charge; and Quantity Variation Charges (as considered above in relation to Clause 7 of the General Terms and Conditions).
- Annual escalation of charges with a measure of inflation.
- Payment by the User of taxes imposed on or incurred by GGT or the owners of the GGP.
- Payment by the User of Goods and Services Tax.
- Continued payment by the User of tariffs and charges where the Service is interrupted.
- Provision by a User to GGT of a surety prior to commencement of a Service.

509. The Authority has considered the range of charges proposed by GGT that are in addition to the Reference Tariff. Quantity Variation Charges were addressed by the Authority in relation to clause 7 of the General Terms and Conditions (paragraphs 468 to 500, above). The other charges are addressed below.

510. The Used Gas Charge is applied by GGT to recover the cost of system-use gas comprising:

- physical losses of gas from the pipeline system;
- accumulated metering errors at Inlet and Outlet Points;
- compressor fuel; and
- gas used by other equipment.

511. The costs associated with system-use gas have not been included in the costs that are the basis of the Reference Tariff. GGT proposes to apportion the cost of system-use gas across all Users on the basis of the gas delivered to each User.

512. The Used Gas Charge is defined as being the product of:

- the quotient of the User's actual quantity of gas delivered at all Outlet Points in a Billing Period and the total quantity of gas delivered from the Pipeline in the same Billing Period; and
- GGT's reasonable assessment of its cost incurred for Used Gas in a Billing Period.

513. In clause 2 of the Sixth Schedule of the General Terms and Conditions, GGT undertakes to provide Used Gas at cost and to make all reasonable endeavours to ensure that the price paid for this gas (Used Gas price) is reasonable.

514. Several submissions made to the Authority addressed the issue of the Used Gas Charge, making the following representations.

- The cost of Used Gas should be subject to a reasonable price cap to give GGT an incentive to ensure the cost of Used Gas is as low as reasonably practicable.
- Unaccounted for gas arises from faults in pipeline operation and the absence of liability of the pipeline operator for the costs of unaccounted for gas is inconsistent with creating an incentive to minimise unaccounted for gas.

515. The Authority has considered the submissions and concurs with the view expressed in submissions that the pass through of the cost of system-use gas (including unaccounted for gas) is inconsistent with an incentive to minimise costs of system-use gas and losses in operation of the pipeline. With regard to unaccounted for gas, however, the Authority notes that for a high-pressure gas transmission pipeline (unlike a distribution system), gas losses through leakage are unlikely to be significant because gas leakages from a high-pressure transmission pipeline would not occur without causing operation difficulties for the pipeline or constituting significant safety or technical hazards. Accordingly, the Authority takes the view that there is no need to include additional incentives in an Access Arrangement to minimise unaccounted for gas.

516. More generally in regard to system-use gas, and in particular use of gas for compression fuel, the Authority is of the view that the system-use gas charge is not reasonable unless GGT provides information to Users to enable Users to monitor the performance of GGT in managing system-use gas and purchasing gas. GGT has indicated in a submission to the Authority that it has in the past provided such information to Users. As such, there is no reason apparent to the Authority as to why explicit provision should not be made in the General Terms and Conditions for this practice to continue.

517. The Authority has also considered whether the terms and conditions of the Reference Service should make provision for Users to provide gas to GGT in lieu of paying the Used Gas Charge. The provision by Users of pipelines of gas to meet system-use requirements of the pipeline is common in the gas transmission industry, and the Authority considers that the facility to do so is consistent with creating incentives for efficient operation of the pipeline. However, while GGT has not made such a provision under the proposed Access Arrangement, there have been no submissions requesting such a facility. The Authority therefore does not consider the absence of the facility in the proposed Access Arrangement for the GGP to be unreasonable.

518. The Supplementary Quantity Option Charge, which is specified in clause 4 of the Sixth Schedule of the General Terms and Conditions, is a charge for capacity secured as a Supplementary Quantity Option under clause 4 of the General Terms and Conditions. The charge is determined at a rate of 105 percent of the Reference Tariff that would be applicable for contracted capacity and throughput for the relevant Outlet Point.

519. None of the submissions received by the Authority addressed the Supplementary Quantity Option Charge and the Authority has no reason to consider the charge to not be reasonable.

520. The three additional charges proposed by GGT – the Account Establishment Charge, Connection Charge and Annual Account Management Charge – are indicated in clause 9 of the General Terms and Conditions and clause 3 of the Sixth Schedule to the General Terms and Conditions to recover costs as follows.

- Connection Charge:
  - for the commencement of a Firm Service, a once-only Connection Charge, payable on the Date of Service Agreement, for each new Outlet Point and, a once-only Connection Charge for each additional Outlet Point nominated or provided during the Service Period; and
  - Users will be charged GGT's direct costs for the installation of facilities associated with the connection of the User's facilities to the GGP.
- Account Establishment Charge:
  - for the establishment of an account for each Service, a once-only, non-refundable Account Establishment Charge, payable on the Date of Service Agreement for each Service; and
  - a value of $1,500 adjusted by the CPI in accordance with clause 9.8 of the General Terms and Conditions.
- Annual Account Management Charge:
  - for the annual maintenance of each account, an annual account management charge, payable on the first Business Day in January during each Year of the Term of the Service Agreement; and
  - a value of $1,500 per annum adjusted by the CPI in accordance with clause 9.8 of the General Terms and Conditions.

521. In considering the provisions for these charges, the Authority has given consideration to whether it is possible that allowance has already been made in forecast Non Capital Costs for the costs to which the charges relate, and whether the charges in addition to the Reference Tariff could potentially result in an over-recovery of costs. GGT has not provided the Authority with any information to justify the charges and assist in this assessment.

522. In relation to the Connection Charge, the Authority is satisfied that the charge is directed to recovering actual costs incurred in undertaking specific works necessary for the commencement of a Service. As such, the Authority is satisfied that this charge is unlikely to recover costs that have already been included in forecasts of Non Capital Costs.

523. The Account Establishment Charge also appears to be directed to recovery of costs incurred prior to commencement of a Service, although there are no particular

activities indicated to be associated with the charge and, in the absence of substantiating information, the value of the charge ($1,500) appears to be arbitrary. Moreover, while the Authority accepts that there may be administrative activities associated with the commencement of a Service to a new User, the Authority has no reason to accept that these activities would not be undertaken by staff of GGT, with the cost already included in forecasts of Non Capital Costs considered in determination of the Reference Tariff.

524. The proposal for the Annual Account Management Charge appears to follow the precedent of the tariffs established under the Tariff Setting Principles which specifically contemplated an Annual Account Management Charge. For this charge, there are also no particular activities indicated to be associated with the charge and, in the absence of substantiating information, the value of the charge ($1,500) appears to be arbitrary. The Authority has no reason to accept that these activities would not be undertaken by staff of GGT, with the cost already included in forecasts of Non Capital Costs considered in determination of the Reference Tariff.

525. The Authority therefore recognises the possibility that the Account Establishment Charge and Annual Account Management Charge may allow for over-recovery of costs. However, the Authority also recognises that the value of the charges (approximately $10,000 per annum for the Annual Account Management Charge with the current number of third-party Users) is immaterial in calculation of the Reference Tariff and does not propose to seek amendment of the Access Arrangement to remove provision for the charges.

526. In addition to the provisions of clause 9 of the General Terms and Conditions relating to particular charges, the Authority has considered the remaining provisions of clause 9 that relate generally to the imposition of charges. The Authority considers several of these provisions to be unreasonable and/or not compliant with the requirements of the Code.

527. Firstly, clause 9.9 of the General Terms and Conditions makes provision for GGT to pass through the costs of taxes to Users as charges in addition to the Reference Tariff:

> 9.9 Taxes
>
> In addition to the tariffs and charges payable under this Service Agreement, the User shall pay to the Owners an amount equal to any tax, duty, impost, levy or other charge (but excluding income tax) imposed by the government or other regulatory authority from time to time on or incurred by GGT or the Owners in respect of the Service provided pursuant to the Service Agreement (including without limitation, any increase of any such tax, duty, impost, levy or other charge) at the same time and in the same manner as the User is obliged to pay for the Service plus any tax or impost on the transfer or retransfer of the ownership of Gas.

528. Clause 9.11 of the General Terms and Conditions makes provision for GGT to pass through the costs of the Goods and Services Tax to Users as charges in addition to the Reference Tariff. Clause 9.11 also provides that, should changes in the income tax regime associated with the GST result in lower costs for GGT, the benefits of these lower costs will also be passed on to Users.

529. It is the view of the Authority that the Code does not provide for a Service Provider to pass through the cost of taxation in the manner proposed by GGT in clauses 9.9 and 9.11 of the General Terms and Conditions.

530. Sections 8.3A to 8.3H do provide for adjustment of a Reference Tariff within an Access Arrangement Period in response to a "Specified Event", which conceivably may include a change in a taxation regime affecting the Service Provider. However, for such an adjustment to be possible, the Access Arrangement must include an "Approved Reference Tariff Variation Method" that includes description of the Specified Event(s) contemplated by the Service Provider. GGT's provisions for the variation of the Reference Tariff under clauses 9.9 and 9.11 of the General Terms and Conditions do not conform to an Approved Reference Tariff Variation Method under the Code.

531. Other than the provisions of sections 8.3 to 8.3H, while the Code does not prevent the levying of charges as contemplated by sub-clause 9.9 of the General Terms and Conditions, the Code does not contemplate the imposition of charges separate to the Reference Tariff for Reference Services, where those charges are in the nature of a Service-provision charge as opposed to a surcharge. Rather, the approach is that there is only one charge. In this regard:

- the concept of "Total Revenue" as defined in section 8.2 of the Code and applied in section 8.4 contemplates that there will only be a single charge for each Reference Service whereby the Service Provider recovers its revenue (being the cost of providing Services) from Users;
- the single charge for each Reference Service will be one Reference Tariff (under section 3.3 of the Code);
- under the definitions of "Reference Tariff", "Tariff" (which refers to "the charge") and "Charge" (which refers to "the amount") in section 10.8 of the Code, the charge that applies is a single amount; and
- sections 8.4, 8.36 and 8.37 specifically allow for the recovery of Non Capital Costs, which appears to the Authority to be the true character of the costs GGT seeks to recover separately to the Reference Tariff.

532. Further, under section 6.13 of the Code, the Arbitrator can only decide to require a Service Provider to provide the Reference Service at the Reference Tariff in a dispute about which tariff should apply to that Reference Service. Section 6.13 effectively means that in any dispute over provision of the Reference Service, GGT bears the risk that the Arbitrator would not require the Prospective User to pay those charges as they do not form part of the Reference Tariff.

533. Accordingly, as the Code does not specifically provide for the imposition of charges in the way proposed by GGT (that is, separate to the Reference Tariff), the Authority is of the view that the charges do not fall within sections 3.1 to 3.20 of the Code and the Authority is unable to approve them as such.

534. In regard to the provisions of clause 9.11 for the pass through of costs of the Goods and Services Tax, the Authority notes that the General Terms and Conditions were drafted and submitted to the Authority prior to the implementation of the Goods and Services Tax and as a result the final details of this tax were uncertain. As the Goods and Services Tax has subsequently been implemented, there is no reason why the tax

margin on transmission charges arising from the Goods and Services Tax could not be incorporated as part of the Reference Tariff.

535. The second matter of concern to the Authority in relation to the general provisions of clause 9 of the General Terms and Conditions is the provision of clause 9.12 for all charges to continue to apply in cases of curtailment of supply for maintenance or due to emergency interruption or *force majeure*. These charges include the Toll Charge and the Capacity Reservation Charge, as defined in the General Terms and Conditions. Although not explicitly stated in clause 9.12, it appears to be expected that the Throughput Charge would only be applied to actual throughput (if any) during the period of interruption. Related provisions exist in clause 17.2 (providing that "a User shall not be relieved from liability to pay money due, including the Toll Charge and the Capacity Reservation Charge which shall continue to accrue and be payable notwithstanding" *force majeure*) and clause 18.5 (providing for a partial reduction of the User's liability for the Capacity Reservation Charge and the Toll Charge where the Reference Service is interrupted for a period in excess of 48 hours and the interruption is directly or indirectly caused by GGT).

536. A submission was made to the Authority that any interruption of gas supply caused by a *force majeure* event or by an emergency has the potential to cause significant commercial business loss to Users. Further, it was submitted that, as GGT has protected itself by removing its liability for such losses in the proposed Access Arrangement, it was inappropriate that charges and tariffs continue to apply in circumstances of an interruption of gas supply.

537. The submission raises the issue of who should bear the financial risk associated with interruptions in the provision of a Service. In the view of the Authority, this issue relates to incentives for the efficient (i.e. least-cost) provision of the Service. An important aspect in assessing the reasonableness of the arrangements to manage emergencies and *force majeure* events is matching the risks associated with these events to the party that is best able to address the consequences. The risk is likely to be most appropriately assumed by the party best able to address the resulting consequences, ensuring incentives for Services to be returned back to normal as rapidly as possible. That is, liability for costs (being the consequences of interruption, such as the business losses to Users or the charges and tariffs during the period of interruption) should rest with the party best able to take action to minimise those costs. This will provide the strongest incentive for cost minimisation.

538. It is therefore the view of the Authority that the provision for charges to be maintained in circumstances of an interruption to the Reference Service is unreasonable. The Authority considers that a reasonable arrangement would be for the direct cost of a Service interruption to rest with GGT where the interruption is caused by factors under GGT's control or for which GGT is in the best position to avoid the risk of interruption or minimise the extent of interruption. These circumstances include interruption to Services:

- arising by virtue of maintenance requirements where GGT has not given at least 30 days notice of the interruption; and
- occurring as a result of a *force majeure* event where GGT is the party claiming the benefit of *force majeure*.

539. In both of these cases, if partial disruption of Service occurs, it appears to the Authority to be appropriate that the fixed charges are waived in proportion to the extent of the disruption. Furthermore, since a User's Accumulated Imbalance and Variance Quantity will be affected by any gas flow restrictions caused by maintenance, emergency or *force majeure*, it is unreasonable that there is no provision for the waiving of the Accumulated Imbalance Charge and the Variance Charge where they are potentially incurred as result of Service interruptions.

540. However, the Authority takes the view that it is reasonable for the fixed charges to continue to apply for interruption due to planned maintenance for which GGT has provided notice of at least 30 days, on the basis that maintenance is readily predictable and is necessary for the prudent operation of the pipeline.

541. The third matter of concern to the Authority in relation to the provisions of clause 9 of the General Terms and Conditions is the provisions of clause 9.13 in relation to the requirement for a User to provide GGT with surety prior to commencement of a Service or at some other time as agreed by the parties, and by way of security for the performance by the User of its obligations under the Service Agreement. Clause 9.13 includes provision for GGT to increase the size of the required surety if the User increases its contracted MDQ.

542. The proposed Access Arrangement does not provide any guidance as to the amount that GGT may require as a bond or deposit, or the amount by which the surety may be increased in response to an increase in MDQ. Moreover, there is no provision for the bond or deposit to be reduced in the event that a User's reserved MDQ is reduced.

543. A submission to the Authority suggested that the method GGT used to calculate the bond should be clearly detailed and highly transparent. It was also submitted that, in determining an increase in the bond resulting from an increase in MDQ which also required the installation of a compressor to the pipeline, the expense of the compressor should not be taken into account as to do so may result in an excessive bond level for what could, theoretically, be a small load increase. It was submitted that the risk for a compressor in these circumstances was dealt with in the capital expenditure provisions of the proposed Access Arrangement.

544. The Authority is of the view that it is reasonable that the size of any bond or deposit reflect the risk to GGT of not being paid by a User and should not necessarily be related to the actual costs incurred by GGT in providing a Service. However, clause 9.13 of the General Terms and Conditions does not constrain GGT to set a reasonable value for a bond or deposit nor does it require GGT to reduce the amount of the value of the bond or deposit upon any decrease in MDQ.

545. The Authority considers that the absence of any constraint on GGT requiring it to set a reasonable value for the bond or deposit (for example, a constraint that the value be for the minimum amount necessary to protect GGT's legitimate business interests) is not reasonable.

Gas Quality and Delivery Conditions

546. Clause 10 of the General Terms and Conditions establishes a gas-quality specification for gas received into the GGP. The gas-quality specification is provided in the Fourth Schedule to the General Terms and Conditions. Clause 10 also:

- establishes the User as being liable for any losses, damages or financial consequences resulting from out-of-specification gas being received into the pipeline on behalf of the User; and
- indicates that neither GGT nor the owners of the GGP make any representation as to the merchantability or suitability for any purpose of the gas received at Outlet Points.

547. None of the submissions received by the Authority addressed these provisions and the Authority has no reason to consider the provisions to not be reasonable.

Measurement of Gas

548. Clause 11 of the General Terms and Conditions relates to the measurement of gas, including the obligations and arrangements for measurement of commingled gas streams and liability for costs associated with measurement equipment and activities. Clause 11 includes provisions relating to:

- attribution between Users of gas received at the Inlet Point;
- operation by GGT of Outlet Facilities at Outlet Points;
- attribution between Users of gas delivered at shared Outlet Points;
- technical requirements for measuring equipment at the Inlet Point and at Outlet Points;
- a requirement for Users to bear the costs of installing, operating and maintaining facilities at the Inlet Point and at Outlet Points; and
- testing of metering equipment.

549. The effect of clause 11.4 of the General Terms and Conditions is that, as between a User and GGT, GGT will not be liable for the costs of installing, operating and maintaining measurement facilities which are not owned by it. A submission was made to the Authority that clause 11.4 is not clear as to whether a User would bear the entire costs to GGT of installing, operating and maintaining measurement facilities that are shared with other Users. It was submitted that there needed to be a fair mechanism for determining the proportion of GGT's total costs that a User had to pay in respect of a measurement facility it shared with other Users.

550. It is the view of the Authority that any arrangements for the sharing of costs between Users, or between Users and other third-party owners of facilities, would be arrangements to which GGT was not a party. As such, it would not be appropriate for

an Access Arrangement to prescribe the terms of such arrangements and the absence of such prescription in the General Terms and Conditions is reasonable.

Representations and Warranties of the User

551. Clause 12 of the General Terms and Conditions sets out the representations and warranties made by a User under a Service Agreement.

552. Submissions were received by the Authority on two of the matters addressed by clause 12.

553. Firstly, it was submitted that clause 12.1(l), which requires a User to warrant that all of the User's gas-consuming equipment supplied at the Outlet Point complies with all relevant laws, was inappropriate as it placed GGT in the role of a regulatory body.

554. It is the interpretation of the Authority that this provision does not place GGT in the role of a regulatory body but rather is designed to avoid any potential liability to GGT that may arise from some form of damaging event resulting from the operations of a User and that is attributed to gas-consuming equipment not complying with relevant laws. The Authority does not consider such a provision to be unreasonable.

555. Secondly, it was submitted that clause 12.1(m) of the General Terms and Conditions, that requires a User to warrant that the User has not in any way represented to any person that a continuous supply of gas (as defined in the proposed Access Arrangement) is guaranteed or can be relied upon, is unworkable. "Gas" is defined in Appendix 1 of the proposed Access Arrangement. The definition refers to gas which meets certain defined criteria and is arguably not limited to gas transmitted through the GGP.

556. It was submitted that the clause was unworkable, particularly in light of obligations arising under a draft licence pertaining to the distribution and retail activities of AlintaGas for the Kalgoorlie Boulder Supply Area, issued pursuant to the *Energy Co-ordination Act 1994 (WA)* and potential obligations to supply gas at significant loads to third parties from a lateral to the GGP.

557. The Authority accepts that GGT is entitled, as much as possible, to reduce any risk to it associated with a User making unwarranted representations to third parties which may result in liability being attributed back to GGT. The Authority also accepts, however, that it would generally be unreasonable for GGT to impose restrictions upon the ability of Users to enter into contracts or arrangements in which GGT is not a party.

558. Moreover, the Authority is of the view that clause 12.1(m) may provide for more than is required to protect GGT's interests, particularly in light of clause 12.2 which provides that the warranty is also taken to be given in respect of each day gas is delivered to the User by GGT or any amount is outstanding under the Service Agreement. Clauses 12.1(m) and 12.2 effectively require a User to provide a blanket warranty that a User has not, before entering into the Service Agreement and during the Service Agreement, guaranteed the supply of gas to any of its customers. Such a warranty is likely to impose a practical restriction on a User's ability to guarantee supply of gas in any contracts it enters into with third parties, irrespective of where a

User intends to source the gas. It is the view of the Authority that this is unreasonable.

559. In the Authority's view, a reasonable approach would be for GGT to limit its liability without effectively imposing requirements on any arrangements that a User may make with its customers. GGT could take steps to prevent any liability to third parties in relation to, for example, misrepresentation by ensuring that Users acknowledge in the Service Agreement that GGT is entitled to interrupt supply of gas from the GGP in accordance with the terms of the Service Agreement and as such, a User is not entitled to a guaranteed continuous supply of gas from the GGP. Further, GGT could require that a User advise third parties of the terms upon which GGT supplies gas to the User.

Invoicing and Payment

560. Clause 13 of the General Terms and Conditions contains provisions relating to invoicing and payment, including:

- information provided with invoices;
- terms of payment;
- disposition of disputes; and
- remedy of incorrect invoices.

561. Clause 13.5 includes a requirement that a User pay the full amount of any disputed invoice prior to referral of the dispute to the dispute resolution procedure contained in clause 22.

562. It was submitted to the Authority that this requirement is unreasonable and the Authority should require amendment of the General Terms and Conditions to remove any obligation on a User to pay invoices which appeared to be erroneous from the User's perspective.

563. The Authority concurs with this submission to the extent that there is a manifest error in an invoice and considers the requirement for the User to pay the full value of the invoice in these circumstances to be unreasonable.

564. Clause 13.7 of the General Terms and Conditions establishes a procedure for correcting overcharging or undercharging in any invoice which has been paid. Pursuant to clause 13.7, interest on the amount of the overcharge or undercharge accrues from the date the invoice was due to be paid.

565. A submission to the Authority suggested that as GGT is responsible for preparation of invoices, the grace period during which interest would not accrue on an overpayment should be significantly less than that for an underpayment, so as to provide GGT with an incentive not to overcharge in the invoices. GGT submitted that no amendment was necessary as the arrangement reflects normal commercial practices.

566. The Authority is of the view that it is appropriate and reasonable for the accrual of interest on any overcharging or undercharging in an invoice to be identical. Further,

the Authority is not satisfied that a significantly less grace period for the accrual of interest in relation to overcharging would provide any incentive for GGT to refrain from overcharging. If a User is being overcharged then it has remedies available to it.

Possession, Responsibility and Title

567. Clause 14 of the General Terms and Conditions relates to possession of, responsibility for, and title to gas, in particular providing for title to gas to pass from the User to GGT when gas is received at the Inlet Point, and for title to pass from GGT to the User when gas is delivered at an Outlet Point.

568. None of the submissions received by the Authority addressed these provisions and the Authority has no reason to consider the provisions not to be reasonable.

Records and Information

569. Clause 15 of the General Terms and Conditions relates to the maintenance of records and information in relation to a Service Agreement, and establishes requirements to protect the confidentiality of information.

570. None of the submissions received by the Authority addressed these provisions and the Authority has no reason to consider the provisions not to be reasonable.

Termination

571. Clause 16 of the General Terms and Conditions contains provisions relating to termination of a Service Agreement in the event of default by one of the parties to the Service Agreement.

572. The Authority notes that provisions for termination of a Service Agreement are not symmetrical as between Users and GGT, and appear to favour GGT and the pipeline owners.

573. Clause 16.1 gives GGT the discretion to immediately terminate the Service Agreement if a User:

> (1) defaults in payment of any moneys payable under the Service Agreement for a period of 7 days following receipt of a notice of demand from GGT;
>
> (2) defaults in the performance of any other obligations imposed upon the User by the Service Agreement and, where such default is capable of remedy, fail to remedy or remove the cause of default within the period of 30 days from receipt of a notice to do so by GGT; or
>
> (3) suffers an "Insolvency Event" to occur (as defined in the proposed Access Arrangement).

574. Clause 16.5(a) provides that a User may terminate the Service Agreement if the owners of the GGP default in the performance of material obligations imposed upon them by the Service Agreement, and, where such default was capable of being remedied, fail to remedy such default within 30 days of receipt of a notice from the User to GGT requiring the owners to remedy such default. Further, clause 16.5(b) provides that where GGT has received a notice pursuant to clause 16.5(a), a User must not terminate the Service Agreement without first allowing a mortgagee or

chargee of the GGP owner's interest in the Service Agreement to have a reasonable opportunity to remedy the default set out in the notice.

575. In relation to these provisions, GGT submitted to the Authority that the termination provisions were adequately reciprocal due to clause 16.1(a) which contains provisions for reasonable periods for rectifying defaults and that such provisions applied equally to Users as a pre-requisite to the Service Provider's option to terminate.

576. It is evident from the provisions of clause 16 that GGT may terminate a User's Service Agreement for default in performance of any of a User's obligations in the Service Agreement. By comparison, a User may only terminate a Service Agreement if an owner of the GGP (as opposed to GGT) defaults in the performance of "material" obligations imposed upon them by the Service Agreement. There is no definition of what those "material" obligations might be. There may be very few such obligations imposed upon the owners of the GGP, particularly as the majority of obligations in the proposed Access Arrangement are imposed upon GGT rather than specifically upon the owners of the GGP.

577. Taking the above into account, the Authority considers that the termination provisions of the General Terms and Conditions are not reasonable.

Force Majeure

578. Clause 17 of the General Terms and Conditions provides for suspension of obligations of the owners of the GGP, GGT and the User under the Service Agreement in circumstances of *force majeure* events. The relief from obligations for Users does not extend to a relief from liability to pay money due, including the Toll Charge and the Capacity Reservation Charge which shall continue to accrue and be payable notwithstanding *force majeure*.

579. *Force majeure* is defined in Appendix 1 of the proposed Access Arrangement:

> Force Majeure means an event or circumstance beyond the reasonable control of the Owners, GGT or the User, as the case may be, which results in or causes a failure by such party in the performance of any obligations imposed on it by the Agreement notwithstanding the exercise by such party of due diligence but excluding any measures which are not economically feasible to the party, and shall include but shall not be limited to acts of God, earthquakes, floods, storms, tempests, washaways, fire, explosions, breakage of or accident to machines, pipelines, or associated equipment, nuclear accidents, acts of war, acts of public enemies, riots, civil commotions, strikes, lockouts, stoppages, pickets, industrial boycotts, restraints of labour or other similar acts (whether partial or general) acts or omissions of the Commonwealth of Australia or the State, shortages of labour or essential materials, reasonable failure to secure contractors, delays of contractors or factors due to overall world economic conditions or factors due to action taken by or on behalf of any government or governmental authority.

580. A submission was made to the Authority that any interruption of gas supply caused by a *force majeure* or by an emergency has the potential to cause significant commercial business loss to Users. Further, it was submitted that, as GGT has protected itself by removing its liability for such losses in the proposed Access Arrangement, it was inappropriate that charges and tariffs continue to apply in circumstances of an interruption of gas supply.

581. The Authority has addressed this issue above in relation to the transportation charges and tariff (paragraphs 537 and 538), indicating the view of the Authority that it is not reasonable for charges to be maintained in circumstances where there is an interruption to the Reference Service.

Liability

582. Clause 18 of the General Terms and Conditions specifies liabilities of parties under, or affected by, the Service Agreement, including:

- limitation of liability for damages arising in the course of delivery of the Service to circumstances of a party's negligence or wilful default;
- limitation of liability of GGT to a User to a maximum of one year of charges that would have been payable to the User;
- limitation of liability of either party for breach of agreement to a liability for direct losses only;
- establishing liability of the User for proximate losses of any employee of the User or party contracting or otherwise associated with the User, arising in respect of occurrences in the vicinity of the Inlet Point, the pipeline, or the Outlet Points, and a number of other premises; and
- a partial reduction of the User's liability for the Capacity Reservation Charge and the Toll Charge where the Reference Service is interrupted for a period in excess of 48 hours and the interruption is directly or indirectly caused by GGT.

583. A submission made to the Authority suggested that the Authority examine the liability provisions under clause 18.1 to ensure that there are adequate levels of protection afforded to all parties. It was also submitted that the risk profile of GGT and a User may not be symmetrical and that this would affect determination of the appropriate treatment for liability and indemnity.

584. The Authority has considered whether the effect of the clause imposes an unnecessary and unreasonable restriction on the ability of Users and the Service Provider to enter into contracts which limit their liability arising from those contracts.

585. Clause 18.1(c) limits the liability of GGT to an amount of no more than the equivalent of one year of charges which would have been payable by the User for the provision of the Service. There is no corresponding limit upon the User's liability. The Authority has no information before it that demonstrates any asymmetry of risk between GGT and Users that would justify the existence of limitations on liability for GGT but not for Users. In the absence of any such information, the Authority takes the view that the bias towards GGT that is created in these circumstances is not reasonable.

586. Clause 18.2 of the General Terms and Conditions provides that where a party is found to have breached a Service Agreement, liability for damages arising out of that breach shall never exceed the direct loss or damage sustained as a result of the breach and

that there shall be no liability for any indirect losses as set out in clause 18.2(a)(1), nor in respect of any claims, demands or actions by any third parties.

587. A submission made to the Authority suggests that as clause 18.2(a)(1) defines indirect losses very broadly to include not only loss of profit but also loss of revenue and income, the Authority should consider whether breach of the Service Agreement or negligence should lead, at least, to liability for gas lost.

588. The Authority notes that general industry practice is to provide for limitations of liability for direct losses, even for negligence, although a number of approved Access Arrangements have provided for greater liability in the case of gross negligence, wilful misconduct or fraud. Further, in all approved and proposed Access Arrangements of which the Authority is aware, the liability provisions are symmetrical. That is, both the User and the Service Provider are subject to any limitations regarding direct losses and are protected by the liability clauses.

589. It is the view of the Authority that it is reasonable for a Service Provider to seek to limit liability to direct losses on the symmetrical basis as proposed in the Access Arrangement.

590. Clause 18.3 of the General Terms and Conditions provides for:

- Users alone to be responsible and liable for payment of moneys by way of compensation in consequence of the occurrence of any injury, death or loss to any person employed by the User or any person contracting or dealing with the User; any loss of or damage to any property of the User or any person contracting or dealing with the User; any other loss incurred by the User or any person contracting or dealing with or relying upon the provisions of goods or services by the User; and

- the User to indemnify the Owners or GGT or any person contracting with the Owners or GGT and their respective employees, agents and servants from and against all liabilities and expenses in connection with any claim, demand, action or proceeding brought by any person in respect of or in relation to any such injury, death, loss or damage, if that injury, death, loss or damage occurs in a proximate location as defined in clause 18.4.

591. A submission was made to the Authority suggesting that the Authority consider whether clause 18.3 might make a User liable for damages for events not reasonably within its control. It is the view of the Authority that the requirement of clause 18.3 for a User to indemnify GGT and related parties in respect of events that are not the fault of the User is unreasonable and unjustifiable on commercial grounds.

592. Clause 18.5 of the General Terms and Conditions allows for a refund in average fixed charges (the “Toll Charge” and the “Capacity Reservation Charge”) in cases where supply is curtailed for more than 48 consecutive hours through either the direct or indirect fault of GGT. The refund is only available if the User makes an application within 14 days.

593. The Authority has already considered the issue of waiving of charges where there is an interruption in the Service (paragraph 537 and 538). However, further to this, the

Authority considers that the provision in clause 18.5 for relief from charges only if a User makes application within 14 days to be unreasonable. The Authority takes the view that it would be reasonable for relief from charges to apply without application by the User.

Insurances

594. Clause 19 of the General Terms and Conditions requires the User to hold certain insurances, including in relation to workers compensation, property damage (in relation to the Inlet Point and Outlet Points) and public liability. The User is required to arrange for endorsement on insurance policies of the interests of the owners of the GGP and GGT such that those interests are effectively insured under those policies and for the insurers to waive rights of subrogation against them.

595. None of the submissions received by the Authority addressed these provisions and the Authority has no reason to consider the provisions to not be reasonable.

Assignment and Transfers of Capacity

596. Clause 20 of the General Terms and Conditions sets out the rights of the owners of the GGP and the User to assign rights under the Service Agreement, the rights of the User to transfer capacity from or to another User, and the right of each party to the Service Agreement to use its interest in the Service Agreement as financial security. Clause 20 also indicates that GGT will publish details of Spare Capacity and Developable Capacity in the GGP.

597. None of the submissions received by the Authority addressed the provisions of clause 20 that relate generally to the assignment of rights, and the Authority has no reason to consider the provisions not to be reasonable.

598. The Authority has considered the provisions for the transfer of capacity in relation to the Trading Policy of the Access Arrangement (paragraph 612 and following of this Amended Draft Decision).

Confidential Information

599. Clause 21 of the General Terms and Conditions sets out requirements for confidentiality of the Service Agreement.

600. None of the submissions received by the Authority addressed the provisions of clause 21 and the Authority has no reason to consider the provisions to not be reasonable.

Dispute Resolution and Arbitration

601. Clause 22 of the General Terms and Conditions establishes a mechanism for dispute resolution, involving stages of notification of a dispute, an obligation to use best endeavours to resolve the dispute by negotiation, and recourse to arbitration. Clause 23 specifically makes provision for arbitration of a dispute in accordance with the *Commercial Arbitration Act 1985 (WA)*.

602. None of the submissions received by the Authority addressed the provisions of clauses 22 and 23 and the Authority has no reason to consider the provisions to not be reasonable.

Notices

603. Clause 24 establishes requirements for the issue of notices under the Service Agreement, relating generally to methods of delivery and deemed times of delivery.

604. None of the submissions received by the Authority addressed the provisions of clause 24 and the Authority has no reason to consider the provisions to not be reasonable.

Waiver, Entire Agreement, Severability and Governing Law

605. Clauses 25 to 27 of the General Terms and Conditions comprise provisions relating to contractual issues:

- a delay or failure of a party to exercise rights under the Service Agreement not comprising a waiver of those rights;
- the Service Agreement constituting the entire agreement between the parties and superseding any prior negotiations, representations or agreements between the parties;
- the finding of any provision of the Service Agreement to be illegal or unenforceable not affecting the remainder of the Service Agreement; and
- the Service Agreement being construed and interpreted in accordance with the law of Western Australia.

606. None of the submissions received by the Authority addressed the provisions of clause 25 to 27 and the Authority has no reason to consider the provisions to not be reasonable.

Capacity Management Policy

607. Sections 3.7 and 3.8 of the Code require that an Access Arrangement include a Capacity Management Policy as follows:

> 3.7 An Access Arrangement must include a statement (a ***Capacity Management Policy***) that the Covered Pipeline is either:
>
> (a) a Contract Carriage Pipeline; or
>
> (b) a Market Carriage Pipeline.
>
> 3.8 The Relevant Regulator must not accept an Access Arrangement which states that the Covered Pipeline is a Market Carriage Pipeline unless the Relevant Minister of each Scheme Participant in whose Jurisdictional Area the Pipeline is wholly or partly located has given notice to the Relevant Regulator permitting the Covered Pipeline to be a Market Carriage Pipeline.

608. Contract Carriage is a system of managing third-party access whereby:

- the Service Provider normally manages its ability to provide Services primarily by requiring Users to use no more than the quantity of Service specified in the Contract;
- Users are normally required to enter into a Contract that specifies a quantity of Service;
- charges for use of a Service are normally based, at least in part, upon the quantity of Service specified in a Contract; and
- a User normally has the ability to trade its right to obtain a Service to another User.

609. Market Carriage is a system of managing third-party access whereby:

- the Service Provider does not normally manage its ability to provide Services primarily by requiring Users to use no more than the quantity of Service specified in a Contract;
- Users are not normally required to enter into a Contract that specifies a quantity of Service;
- charges for use of Services are normally based on actual usage of Services; and
- a User does not normally have the ability to trade its right to obtain a Service to another User.

610. Clause 11 of the Proposed Access Arrangement provides that GGT will manage the GGP as a Contract Carriage Pipeline.

611. The Code requires no more than a statement in the Access Arrangement that the GGP be a Contract Carriage Pipeline or, subject to Ministerial Approval for any proposal for the pipeline to be a Market Carriage Pipeline, a Market Carriage Pipeline. As the proposed Access Arrangement states that the GGP is to be managed as a Contract Carriage Pipeline, the requirements of the Code are met.

Trading Policy

612. Section 3.9 of the Code requires that an Access Arrangement for a Covered Pipeline that is described in the Access Arrangement as a Contract Carriage Pipeline must include a policy that explains the rights of a User to trade its right to obtain a Service to another person (a "**Trading Policy**").

613. Section 3.10 of the Code requires that the Trading Policy must comply with the following principles.

> 3.10 (a) A User must be permitted to transfer or assign all or part of its Contracted Capacity without the consent of the Service Provider concerned if:
>
> (i) the User's obligations under the contract with the Service Provider remain in full force and effect after the transfer or assignment; and

(ii) the terms of the contract with the Service Provider are not altered as a result of the transfer or assignment (a ***Bare Transfer***).

In these circumstances the Trading Policy may require that the transferee notify the Service Provider prior to utilising the portion of the Contracted Capacity subject to the Bare Transfer and of the nature of the Contracted Capacity subject to the Bare Transfer, but the Trading Policy must not require any other details regarding the transaction to be provided to the Service Provider.

(b) Where commercially and technically reasonable, a User must be permitted to transfer or assign all or part of its Contracted Capacity other than by way of a Bare Transfer with the prior consent of the Service Provider. The Service Provider may withhold its consent only on reasonable commercial or technical grounds and may make its consent subject to conditions only if they are reasonable on commercial and technical grounds. The Trading Policy may specify conditions in advance under which consent will or will not be given and conditions that must be adhered to as a condition of consent being given.

(c) Where commercially and technically reasonable, a User must be permitted to change the Delivery Point or Receipt Point from that specified in any contract for the relevant service with the prior written consent of the Service Provider. The Service Provider may withhold its consent only on reasonable commercial or technical grounds and may make its consent subject to conditions only if they are reasonable on commercial and technical grounds. The Trading Policy may specify conditions in advance under which consent will or will not be given and conditions that must be adhered to as a condition of consent being given.

614. Section 3.11 of the Code states that examples of things that would be reasonable for the purposes of paragraphs 3.10(b) and (c) are:

3.11 (a) the Service Provider refusing to agree to a User's request to change its Delivery Point where a reduction in the amount of the service provided to the original Delivery Point will not result in a corresponding increase in the Service Provider's ability to provide that service to the alternative Delivery Point; and

(b) the Service Provider specifying that, as a condition of its agreement to a change in the Delivery Point or Receipt Point, the Service Provider must receive the same amount of revenue it would have received before the change.

615. In clause 9 of the proposed Access Arrangement, GGT provides a Trading Policy by reference to clause 20 of the General Terms and Conditions. Clause 20 of the General Terms and Conditions provides for:

- Bare Transfers of capacity (clause 20.6);
- other transfers of capacity (clause 20.7); and
- assignment of rights of a User under a Service Agreement (clauses 20.1 to 20.5).

616. As a general matter in relation to the Trading Policy, it is not clear that the provisions of the Trading Policy provide generally for transfer of contracted capacity between Users, or whether the provisions have application only to contracted capacity for the Reference Service.

617. Clause 9 of the proposed Access Arrangement enables the Service Provider to transfer or assign all or part of a User's rights under a Service Agreement. The circumstances under which these rights may be transferred or assigned are detailed in clause 20 of the General Terms and Conditions.

618. A Service Agreement is defined in the proposed Access Arrangement as a "Reference Service Agreement". However, the Code does not constrain a Trading Policy to apply exclusively to a Reference Service, as defined in the Code, but rather provides that a Trading Policy is to apply to all Services provided in respect of the Covered Pipeline.

619. GGT has submitted that, due to the interaction of the State Agreement and the Code, it is not possible to apply the Trading Policy requirements of the Code to all capacity in the GGP. GGT has also submitted that, to the extent that the Code applies to capacity, the Trading Policy will apply to both Reference and Non-Reference Services.

620. In light of the decision of the Court in the WMC Decision,[100] the Authority is of the view that nothing in the State Agreement affects the requirement in sections 3.10 and 3.11 of the Code which require the Trading Policy, and provisions for trading of pipeline capacity set out therein, to apply generally to capacity and Service contracts for a pipeline regardless of whether the Service contracts are or are not for a specific Service. The proposed Access Arrangement, with provisions for trading of capacity limited to contracts for the Firm Service, does not comply with this requirement.

621. Turning to specific provisions of the Trading Policy, the Code requires that an Access Arrangement make provision for "Bare Transfers" and conditional transfers of capacity.

622. The Code defines a "Bare Transfer" as a transfer or assignment of all or part of a User's contracted capacity where the terms of the Contract with the Service Provider are not altered as a result of such transfer or assignment.

623. Under clause 20.6(b) of the General Terms and Conditions, certain information must be supplied to GGT by a "new User" of capacity transferred through a Bare Transfer before the "new User" can utilise the transferred capacity. Clause 20.6(b) of the General Terms and Conditions provides:

> 20.6 …
>
> (b) As a condition to obtaining GGT's consent, a User must advise GGT of the following:
>
> (1) the portion of the User's Capacity entitlement under the Service Agreement which is to be Transferred Capacity;
>
> (2) the identity of the New User;
>
> (3) the Outlet Point(s) to be utilised by the New User;
>
> (4) the respective MDQ for the Inlet Point and Outlet Point(s);
>
> (5) the term of the assignment or transfer of that Capacity entitlement to the New User; and
>
> (6) any rights reserved by the User in the Transferred Capacity with respect to priority to Capacity in the event of an interruption or curtailment to the Service, or any other matter relevant to the respective rights of the User and New User.

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[100] WMC Decision, ibid.

624. Clause 20.6(b) of the General Terms and Conditions is inconsistent with section 3.10(a) of the Code as it requires a transferee of capacity (or "new User") to notify GGT of matters other than that the transferee is the entity which is going to utilise the portion of the contracted capacity subject to the Bare Transfer and of the nature of the contracted capacity subject to the Bare Transfer.

625. For capacity transfers other than Bare Transfers, clause 20.7 of the General Terms and Conditions provides that GGT may withhold its consent to the transfer on reasonable commercial or technical grounds or make approval of the transfer subject to conditions that are reasonable on commercial or technical grounds. These conditions may include the requirement that a "new User" enter into a Deed of Covenant under which it agrees to be bound by the Service Agreement or to pay a bond. There are also several other requirements imposed upon a "new User" by clause 20.7.

626. GGT has submitted that clause 20.7 is reasonable as GGT may only withhold its consent on reasonable technical or commercial grounds.

627. A submission was made to the Authority that the conditions imposed on transfers of capacity other than Bare Transfers may restrict development of a secondary market.

628. The Authority takes the view that while there is a broad discretion for GGT to impose conditions on transfers of capacity, the provisions for conditions, and for withholding of consent on reasonable technical or commercial grounds, are consistent with the explicit requirements and provisions of the Code in respect of transfers of capacity other than Bare Transfers.

629. Submissions made to the Authority have indicated concern that the proposed Access Arrangement does not require GGT to establish and operate a secondary market for trading in capacity in the GGP. It was submitted that GGT should be required to establish and operate such a secondary market.

630. The Authority accepts that the development of a secondary market to trade in capacity may be important in facilitating the optimal use of the GGP and in encouraging its development. However, there is no explicit requirement under the Code for an Access Arrangement to make provision for a Service Provider to establish and operate a secondary market in relation to capacity. Even if the Authority was minded to do so, it would not have the power to refuse to approve a proposed Access Arrangement on the basis it did not contain such a provision.

Queuing Policy

631. Section 3.12 of the Code requires that an Access Arrangement must include a policy for determining the priority that a Prospective User has, as against any other Prospective User, to obtain access to Spare Capacity and Developable Capacity (and to seek dispute resolution under section 6 of the Code) where the provision of the Service sought by that Prospective User may impede the ability of the Service Provider to provide a Service that is sought or which may be sought by another Prospective User (a "**Queuing Policy**").

632. Section 3.13 of the Code requires that the Queuing Policy must:

(a) set out sufficient detail to enable Users and Prospective Users to understand in advance how the Queuing Policy will operate;

(b) accommodate, to the extent reasonably possible, the legitimate business interests of the Service Provider and of Users and Prospective Users; and

(c) generate, to the extent reasonably possible, economically efficient outcomes.

633. Section 3.14 of the Code provides for the Authority to require the Queuing Policy to deal with any other matter the Authority thinks fit, taking into account the matters listed in section 2.24 of the Code.

634. GGT has provided a Queuing Policy at clause 7 of the proposed Access Arrangement (which comprises only sub-clause 7.1), as follows.

7.1 Queuing Policy for Provision of Service

(a) As between Prospective Users seeking a Reference Service, the priority for allocation of Spare Capacity and Developable Capacity will, in respect of the Services, be determined on a first come, first served basis when a completed and executed Order Form is received by GGT under clause 6.3 on the basis that an Order Form having an earlier receipt date will have priority over an Order Form having a later receipt date.

(b) GGT will ensure that, as between Prospective Users, Order Forms are processed and Spare Capacity will be allocated in the order which reflects their priority or deemed priority under clause 7.1(a).

(c) A Prospective User will cease to maintain its priority for allocation of Spare Capacity or Developable Capacity if:

(1) its Order Form is rejected pursuant to clause 6.8(a);

(2) its Order Form is rejected pursuant to clause 6.8(b)(2);

(3) the Prospective User withdraws its Order Form;

(4) fails to comply with the terms of the Service Agreement; or

(5) an Insolvency Event occurs in relation to the Prospective User.

(d) If a Prospective User submits an amended application pursuant to clause 6.8, subject to clause 6.8(b), the amended application or notional supplementary application will have priority according to the date of receipt of the amendments by GGT.

(e) If the User:

(1) exercises an option to extend the Term of the Agreement; or

(2) gives notice under clause 6.10 of its desire to increase the MDQs or extend the Term of the Agreement,

the exercise of the option or notice will be deemed to be a new application for Spare Capacity and Developable Capacity and the date GGT receives notice of the exercise of the option or request for increase or extension will determine the priority accorded to the new application.

(f) If Spare Capacity becomes available or Developable Capacity is provided, GGT will use all reasonable endeavours to notify Prospective Users of that Spare Capacity or Developable Capacity in an order and manner which has regard to the rights of Users under Existing Contracts.

(g) The rights of any Prospective User under and the operation of this clause is subject to and conditional on GGT complying with and satisfying any legal or contractual obligations it has to provide additional Capacity under, or to extend the term of, an Existing Contract.

635. The Queuing Policy provides for Spare Capacity and Developable Capacity to be allocated on a "first-come first-served" basis with priority accorded to the date an order is received from Prospective Users by GGT for Spare Capacity and Developable Capacity. This appears to include situations where an existing User seeks to extend the term of an existing Service Agreement, or seeks to increase the MDQ pertaining to an existing Service Agreement (sub-clause 7.1(f)), except where GGT is under a legal or contractual obligation to do so outside of the provisions of the queuing policy (sub-clause 7.1(g)).

636. It has been submitted to the Authority that the allocation of priority between Prospective Users seeking Reference Services on a first-come first-served basis does not provide sufficient flexibility to, for example:

- accept later-in-time Prospective Users seeking only the Reference Service whilst an earlier Prospective User is engaged in a protracted negotiation or arbitration with GGT; or

- accept a later-in-time Prospective User that seeks the Reference Service for a greater amount of capacity and longer duration than the first-in-time Prospective User.

637. It has also been submitted that the "first-come first-served" basis does not meet the requirements of sections 3.13(b) and 3.13(c) of the Code: accommodating the legitimate business interests of the Service Provider and of Users and Prospective Users, and generating economically efficient outcomes.

638. The Authority notes that the first-come first-served principle is a common basis for Queuing Policies in other Access Arrangements for Australian transmission pipelines.

639. The Authority accepts that some flexibility in a Queuing Policy for access to Spare and Developable Capacity may accommodate the legitimate business interests of a Service Provider, Users and Prospective Users. However, the Authority is of the view that there are other mechanisms in the proposed Access Arrangement that provide flexibility in the priority of access to capacity that meet those legitimate business interests. These mechanisms include the right to trade capacity and the ability of Users and Prospective Users to enter into arrangements with the Service Provider to finance investment and expansions of capacity.

640. Further, the Authority notes that section 3.13(a) of the Code requires that a Queuing Policy set out sufficient detail to enable Users and Prospective Users to understand in advance how the policy will operate. It is the view of the Authority that it would be difficult to relevantly increase the flexibility of the Queuing Policy whilst maintaining the integrity of the existing mechanisms in the proposed Access Arrangement that provide certainty and clarity in the manner in which the Queuing Policy would operate.

641. The Authority therefore considers the first-in first-served basis of the queuing Policy to be consistent with the requirements of section 3.13 of the Code.

642. Notwithstanding this, there is some ambiguity in the Queuing Policy as to the priority accorded to a request for capacity in the form of an existing User exercising an option

to extend the term of a contract or to increase the contracted capacity under a contract. Sub-clause 7.1(e) of the Queuing Policy provides that, in instances where a User exercises an option to extend the term of an existing Service Agreement or gives notice to increase the contracted capacity or to extend the term of a Service Agreement, the exercise of such an option or the giving of such a notice is deemed to be a new application for Spare Capacity and/or Developable Capacity. Sub-clause 7.1(g), however, would seem to make the Queuing Policy subordinate to the exercise of an option that is a contractual right of an existing User.

643. It was submitted to the Authority that the Queuing Policy should clarify the differences, if any, between rights of Users and the owners of the GGP with contracts existing prior to the proposed Access Arrangement, and Prospective Users seeking a Reference Service. A submission was also made to the Authority that the Queuing Policy should be amended to clearly state the position of an existing User wishing to exercise a contractual option to increase contracted capacity. Further, it was submitted that existing Users increasing their contracted capacity should have priority in respect of smaller quantities of gas, with new Prospective Users gaining access to "newer" capacity on the basis that existing Users should not be placed at a disadvantage through treatment afforded to new Prospective Users.

644. The Authority does not consider there to be any cause under the objectives for a Queuing Policy for the Queuing Policy to have, as a general principle, prior rights being accorded to existing Users over "new" Users in applications for additional capacity. There is no *a priori* reason to consider that such a principle is necessarily consistent with the legitimate business interests of the Service Provider or of Users and Prospective Users, or would generate economically efficient outcomes. Nevertheless, the Authority does consider it to be consistent with the economically efficient use of the pipeline that a User should be able to enter into a contract with GGT that provides the User with an option to extend the term of the contract and/or provides for an increase in contracted capacity without either the extension of term or the increase in capacity being subject to the queuing provisions. Sub-clause 7.1(g) of the proposed Access Arrangement suggests that this is the intent of GGT, although the Authority considers that, consistent with the objective of section 3.13(a) of the Code, this should be made more explicit.

645. A submission made to the Authority has stated that it is not clear how the provision under clause 4 of the General Terms and Conditions for GGT to provide Supplementary Quantity Options may affect the rights of Prospective Users in the queue for capacity.

646. The Authority has addressed the provisions for GGT to provide a Supplementary Quantity Option in relation to clause 4 of the General Terms and Conditions (paragraphs 452 to 456). It is indicated in clause 4 of the General Terms and Conditions that a Supplementary Quantity Option is a facility available to Users of the Reference Service that enables these Users to access additional capacity on an occasional basis in order that they may correct imbalances or transport gas in excess of their MDQ. The Supplementary Quantity Option appears similar in effect to a selling of capacity on a short-term spot market.

647. The Authority interprets clause 4 of the General Terms and Conditions as indicating that the facility of the Supplementary Quantity Option provides only for short-term

access to capacity and does not affect, nor interact with, provisions of the Access Arrangement (including the Queuing Policy) relating to contracting for capacity on a longer term basis.

Extensions/Expansions Policy

648. Section 3.16 of the Code requires that an Access Arrangement include a policy (an "**Extensions/Expansions Policy**") which states:

(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);

(b) specify how any extension or expansion, which is to be treated as part of the Covered Pipeline, will affect Reference Tariffs (for example, the Extensions/Expansions Policy could provide:

(i) Reference Tariffs will remain unchanged but a Surcharge may be levied on Incremental Users where permitted by sections 8.25 and 8.26 of the Code; or

(ii) specify that a review will be triggered and that the Service Provider must submit revisions to the Access Arrangement pursuant to section 2.28 of the Code);

(c) if the Service Provider agrees to fund New Facilities if certain conditions are met, a description of those New Facilities and the conditions on which the Service Provider will fund the New Facilities.

649. Section 3.16 further provides that the Authority may not require the Extensions/Expansions Policy to state that the Service Provider will fund New Facilities, unless the Service Provider agrees.

650. An Extensions/Expansions Policy is provided by GGT in clause 10 of the proposed Access Arrangement. The key elements of this policy are summarised as follows.

651. Clause 10.1 of the proposed Access Arrangement sets out conditions on which GGT will endeavour to expand the pipeline.

10.1 GGT will use all reasonable endeavours to extend or expand the GGP where the proposed extension or expansion:

(a) is technically feasible and economically viable;

(b) is consistent with the safe and reliable operation of the Pipeline;

(c) receives all relevant regulatory approvals; and

(d) has regard to good pipeline industry practice.

652. Clause 10.2 indicates that GGT will undertake investigations of Developable Capacity, and provides for the costs of the investigations to be met by a Prospective User, or for GGT to undertake the investigations at its own initiative and its own cost.

653. Clause 10.3 provides for an extension or expansion of the pipeline to become part of the Covered Pipeline if GGT elects for it do so, and with the consent of the Authority.

654. Clause 10.4 indicates the effect of an extension or expansion on the Reference Tariff.

> 10.4 (a) Pipeline extension or expansions will result in no change to the Reference Service Tariff applied to a User when those extensions or expansions have been fully funded by that User's capital contributions.
>
> (b) Incremental Users as defined in the Code which have not made capital contributions towards Incremental Capacity as defined in the Code which they use and which has been funded by others will be liable to pay for surcharges as allowed for in section 8 of the Code.
>
> (c) Pipeline extensions or expansions funded by GGT may result in the application of surcharges as allowed for in section 8 of the Code.

655. Several submissions made to the Authority sought clarification of the Authority's role in respect of a decision to include an extension or expansion in the Covered Pipeline. In particular, it was submitted to the Authority that the proposed Access Arrangement should clearly define whether the Authority must approve any decision by GGT to have or not to have an extension or expansion form part of the Covered Pipeline, and that the Authority should act to prevent an expansion that was uneconomic being included as part of the Covered Pipeline.

656. The Authority 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.

657. Section 3.16(a) of the Code appears to make provision for an Access Arrangement to require that a Service Provider notify the Authority of any decision to include or not include an extension or expansion as part of the Covered Pipeline. While the Authority is 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 is of 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.

658. The Authority notes that the commercial "soundness" of investments in extensions or expansions of a pipeline is not a matter of relevance to inclusion of that extension or expansion as part of the Covered Pipeline. The commercial soundness of the investment is, however, a matter that the Authority would be required to consider under section 8.16 of the Code in respect of a determination of whether the value of the investment should be added to the Capital Base of the pipeline for the purposes of determining the Reference Tariff.

659. Clause 10.2 of the proposed Access Arrangement includes provision for a Prospective User that makes an access request for Developable Capacity to be required to pay for the investigations regarding the feasibility of such extension/expansion and to make a commitment to an agreed contribution to the costs of installing Developable Capacity.

This provision relates to clause 6.4 of the proposed Access Arrangement under which GGT would provide a Prospective User with an indication of the costs and charges which may apply to the provision of Developable Capacity as well as indicative costs of investigations that Prospective Users may be required to meet in respect of investigations into available capacity.

660. A submission was made to the Authority that the obligations on Prospective Users to pay for the investigations of Developable Capacity should be removed. It was submitted that this effectively required Prospective Users to pay for GGT's business development costs which, it was submitted, are already included in the operating costs sought by GGT. A further submission was made to the Authority that while it is reasonable for Prospective Users to be required to pay to investigate the costs of installing Developable Capacity, it is not reasonable to require Prospective Users to contribute to meeting the cost of installing Developable Capacity before the investigations have been completed and the cost of providing that capacity has been determined.

661. The provision in the proposed Access Arrangement for Prospective Users to meet the costs of investigations of Developable Capacity is consistent with section 5.5 of the Code, which contemplates Users meeting reasonable costs incurred by a Service Provider in undertaking investigations to determine if an access request can be met.

662. However, in accordance with the submission received and taking into account the interests of the Service Provider and of Prospective Users, the Authority does not consider that it is reasonable that Prospective Users should be required to agree to make a contribution to the costs of installing Developable Capacity before investigations as to the extent of those costs have been completed.

663. A submission was made to the Authority querying the interaction between the requirement under the proposed Access Arrangement that a Prospective User contribute to the cost of Developable Capacity and sections 6.22 and 6.23 of the Code (relating to the resolution of an access dispute) and sections 8.23 to 8.26 of the Code (relating to Capital Contributions and Surcharges).

664. Sections 6.22 and 6.23 of the Code address circumstances in which a Service Provider may be obliged to provide capacity. These sections become relevant when a Service Provider and a Prospective User cannot agree on new capacity. In such a case, the matter may be referred to the Arbitrator who may require the Service Provider to expand capacity of the Covered Pipeline. Specific guidelines are provided in the Code to guide the Arbitrator in this regard. In particular, the Service Provider cannot be required to fund any expansion and the Service Provider must levy Surcharges on Incremental Users (other than the Prospective User) for the purposes of recovering the cost of the New Facilities Investment.

665. Section 8.26 of the Code provides a framework and establishes conditions under which a Service Provider may levy a Surcharge on Users of Incremental Capacity.

666. In the view of the Authority, the objective of these sections of the Code is to make provision for the development of capacity to be financed by Users of that capacity. Therefore, in the Authority's view, these provisions of the Code are contemplated by clause 10.4 of the proposed Access Arrangement, but not by clauses 6.4 or 10.2 that

relate generally to the costs of investigating whether an access request may be satisfied by Spare Capacity or Developable Capacity, rather than mechanisms of financing development of Developable Capacity.

667. On a related matter, a submission was made to the Authority that, in the event of Incremental Capacity having been financed by Users, it was not clear whether the proposed Access Arrangement provided a mechanism to ensure that the structure of the Surcharge on additional Users of the Incremental Capacity reflected a fair and reasonable sharing of the total recoverable costs between the Incremental Users, as required under section 8.26(c) of the Code.

668. The circumstances in which Surcharges are applied are complex and the Code does not provide a detailed, prescriptive methodology for calculating Surcharges. The circumstances in which a Service Provider may impose a Surcharge on an Incremental User, where a Capital Contribution has been made by an existing User, involves consideration of a number of issues relating to the balancing of interests between the Service Provider, other Incremental Users and, in particular, any contributing Users.

669. Sections 8.25 and 8.26 of the Code deals with the circumstances in which a Service Provider may apply Surcharges:

> 8.25 As contemplated in section 8.19(a), unless precluded by the Service Provider's Extensions/Expansions Policy, a Service Provider may elect by written notice to the Relevant Regulator to recover all or part of an amount that it would not recover at the Prevailing Tariffs through a ***Surcharge*** (after commencement of the next Access Arrangement Period, this amount is that amount that would otherwise constitute Speculation Investment). A Surcharge is a Charge in addition to the Charge that would apply under a Reference Tariff for a Reference Service (or, in relation to another Service, under the Tariff that would be determined by the Arbitrator in arbitrating an access dispute under section 6) that is levied on Users of Incremental Capacity in order for the Service Provider to recover some or all of the cost of New Facilities Investment that can not be recovered at the Prevailing Tariffs (and so cannot be included in the Capital Base in subsequent Access Arrangement periods). If the Relevant Regulator receives such a written notice, it may approve the Surcharge, with an approval having the effect of binding the Arbitrator in an access dispute under section 6. For the purposes of public consultation, the notice shall be treated as if it were a proposed revision to the Access Arrangement submitted under section 2.28.
>
> 8.26 A Service Provider may levy a Surcharge on Users of Incremental Capacity provided the following principles apply:
>
> (a) the Surcharges are designed to recover only that part of the New Facilities Investment that satisfies the requirement in section 8.16(a);
>
> (b) the costs that the Surcharges are designed to recover do not include any costs that are included in the Speculative Investment Fund; and
>
> (c) the structure of the Surcharges reflect a fair and reasonable sharing of the total recoverable cost between Incremental Users (and for this purpose any User who is paying a Capital Contribution should be assumed to be paying a Surcharge).

670. Although section 8.25 of the Code is not expressed to be subject to section 8.26, the Authority is of the view that the provisions are intended to operate together. Accordingly, a Service Provider may only apply a Surcharge if the Service Provider has given notice to the Authority pursuant to section 8.25 and the Surcharge satisfies the conditions in section 8.26.

671. Under section 8.26(a), the Surcharge must not exceed the amount that would be invested by a prudent Service Provider acting efficiently, in accordance with accepted industry practice and to achieve the lowest sustainable cost of delivering Services. Further, section 8.26(c) requires the structure of the Surcharges to reflect a fair and reasonable sharing of the total recoverable cost between Incremental Users. It assumes any User paying a Capital Contribution is paying a Surcharge. Accordingly, to the extent that a contributing User has not recovered its contribution, the Service Provider cannot impose a Surcharge on the contributing User. Alternatively, the Surcharge must be adjusted downwards to reflect that User's Capital Contribution.

672. Section 6.23 of the Code provides some guidance to the Arbitrator in a dispute on how the costs of Capital Contributions by Prospective Users are to be shared. Pursuant to section 6.22(e), the Service Provider cannot be required to fund New Facilities necessary to meet the requirements of a Prospective User. Under section 6.23, where the Prospective User funds the New Facilities, that funding is treated as if it were incurred by the Service Provider. The Service Provider is then required to impose a Surcharge on Incremental Users (excluding the Prospective User, except for the purposes of calculation of the Surcharge to be imposed). The Service Provider may be required to grant access to a Prospective User on terms that reflect the value to the Service Provider of the Prospective User's contribution.

673. In summary, the provisions of the Code have effect as follows.

- As New Facilities Investment financed by Capital Contributions from Users is treated as if it were incurred by the Service Provider, it will be rolled into the Capital Base and reflected in Tariffs (subject to meeting the prudent Service Provider test). Future Users are thus prevented from "free-riding" on the Capital Contributions of other Users.

- The effect of rolling the expenditure into the Capital Base and requiring the imposition of Surcharges is to give the Service Provider a return on an investment that it never made. To avoid such an outcome, the contributing User's terms of access must "reflect the value to the Service Provider of the contribution". The contributing User must receive a rebate that will, in effect, give back to the contributing User the return on investment which the Service Provider would otherwise receive. This will include items such as depreciation, the Surcharges collected from Incremental Users and so on.

674. Clause 10.4 of the proposed Access Arrangement includes a description of the circumstances in which a Surcharge may be applied where a pipeline has been extended or expanded.

675. In the view of the Authority, clause 10.4 of the proposed Access Arrangement makes provision for Capital Contributions and Surcharges in accordance with the relevant provisions of the Code. It is not necessary for the proposed Access Arrangement to set out how a Surcharge would actually be calculated, but rather any proposed Surcharge should be determined in accordance with the principles set out in section 8.26 of the Code, and there is a requirement on the Service Provider to provide written notice to the Authority of any intent to levy a Surcharge. The Authority is of the view that this latter requirement on GGT should be made explicit in the Extensions/Expansions Policy.

Review and Expiry of the Access Arrangement

676. Section 3.17 of the Code sets out the requirements for an Access Arrangement to specify dates for review of the Access Arrangement:

> 3.17 An Access Arrangement must include:
>
> (a) a date upon which the Service Provider must submit revisions to the Access Arrangement (a ***Revisions Submission Date***); and
>
> (b) a date upon which the next revisions to the Access Arrangement are intended to commence (a ***Revisions Commencement Date***).
>
> …

677. In approving the Revisions Submissions Date and Revisions Commencement Date, the Authority must have regard to the objectives for Reference Tariffs and the Reference Tariff Policy in section 8.1 of the Code. In making a decision on an Access Arrangement (or revisions to an Access Arrangement) and, if considered necessary having had regard to the objectives in section 8.1 of the Code, the Authority may, under section 3.17 of the Code:

> (i) require an earlier or later Revisions Submission Date and Revisions Commencement Date than proposed by the Service Provider in its proposed Access Arrangement;
>
> (ii) require that specific major events be defined that trigger an obligation on the Service Provider to submit revisions prior to the Revisions Submission Date.

678. Section 3.18 of the Code provides for an Access Arrangement Period to be of any length; however, if the Access Arrangement Period is more than five years, the Authority must not approve the Access Arrangement without considering whether mechanisms should be included to address the risk of forecasts on which the terms of the Access Arrangement were based and approved proving to be incorrect. These mechanisms may include:

> (a) requiring the Service Provider to submit revisions to the Access Arrangement prior to the Revisions Submission Date if certain events occur, for example:
>
> (i) if a Service Provider's profits derived from a Covered Pipeline are outside a specified range or if the value of Services reserved in contracts with Users are outside a specified range;
>
> (ii) if the type or mix of Services provided by means of a Covered Pipeline changes in a certain way; or
>
> (b) a Service Provider returning some or all revenue or profits in excess of a certain amount to Users, whether in the form of lower charges or some other form.

679. Where a mechanism is included in an Access Arrangement pursuant to section 3.18(a) of the Code, the Authority must investigate no less frequently than once every five years whether a review event identified in the mechanism has occurred.

680. Clause 3.1 of the proposed Access Arrangement states that the Access Arrangement will come into effect on the "Effective Date" (the date on which the Access Arrangement comes into effect, as specified by the Authority) and will continue for approximately 5 years. The Revisions Submission Date is not specified in the proposed Access Arrangement but, pursuant to clause 3.2 of the proposed Access Arrangement, is to be 4½ years after the Effective Date. The Revisions

Commencement Date (or start of a new Access Arrangement) is also not specified, but clause 3.2 of the proposed Access Arrangement states that such date is the later of 5 years after the Effective Date or when the revised Access Arrangement is approved by the Authority.

681. Clause 3.3 of the proposed Access Arrangement makes provision for GGT to conduct a review at any time, including if any one of the following events occur:

(a) a Pipeline Extension which is subject to this Access Arrangement is undertaken;

(b) there is a material or significant change in the market, economic, political or general regulatory conditions or circumstances from those which, at the Effective Date, are forecast and assumed will exist for the duration of this Access Arrangement;

(c) there is a change in the provisions or administration of any Act or other law, including the Code or the Trade Practices Act 1974 (Cwth), which necessitates a review of this Access Arrangement;

(d) any other event occurs which requires this Access Arrangement to be updated or amended under any other provision of this Access Arrangement; or

(e) GGT believes it has reason to make a change to this Access Arrangement.

682. The proposed Access Arrangement provides for an Access Arrangement Period of 5 years after the Effective Date. Therefore, the Access Arrangement Period would extend well beyond the period of 5 years after submission of the proposed Access Arrangement, and according to a reasonable timetable for approval of the proposed Access Arrangement would extend to some time in 2009. In its submission to the Authority of December 2002, GGT contemplated the Access Arrangement Period extending to June 2007 and provided forecasts of costs, contracted capacity and throughput to that date. The Authority also obtained from GGT (pursuant to serving of a notice to GGT under section 41 of the *Gas Pipelines Access Law*) forecasts of costs, contracted capacity and throughput for the period to December 2009, which enable calculation of an indicative Reference Tariff for a period ending at that date (as described earlier in this Amended Draft Decision).

683. Submissions made to the Authority by parties other than GGT took issue with the proposed Access Arrangement Period and Revisions Submission Date, although one User submitted that, due to the length of time taken to reach a Final Decision, GGT should be required to provide additional information on forecasts of cost and pipeline utilisation that would cover the proposed Access Arrangement Period.

684. The Authority is cognisant of the extended time taken for assessment of the proposed Access Arrangement and is of the view that there would be considerable merit in having an Access Arrangement Period extend for five years from the date of approval of the proposed Access Arrangement to, for example, the end of 2009. However, the Authority is also mindful of the need for procedural fairness in assessment and approval of the proposed Access Arrangement, in particular providing an opportunity for interested parties to scrutinise the forecast information upon which the determination of the Reference Tariff is based. Therefore, the Authority considers that for the purposes of this Amended Draft Decision it is required by the Code (and principles of procedural fairness) to require that the proposed Access Arrangement make provision for a Revisions Commencement Date of 1 January 2006.

685. Notwithstanding this, the Authority has included in this Amended Draft Decision the forecast information provided to it by GGT for the period to December 2009 and an indicative Reference Tariff for this period. On the basis of the information available to it at the time of making this Amended Draft Decision and subject to consideration of any submissions made on the forecasts for the period to December 2009, the Authority may be amenable to allowing a Revisions Commencement Date of 1 January 2010 if proposed by GGT.

686. The Authority also notes that it is of the view that ideally there should be a nine month period between the Revision Submission Date and the Revision Commencement Date to allow for assessment and approval of proposed revisions.

687. Various submissions made to the Authority addressed the inclusion in the proposed Access Arrangement of trigger mechanisms for a review of the approved Access Arrangement. The matters raised in submissions included that a trigger mechanism for review should occur when there is a change in the corporate tax rate, a major variation in gas throughput or when actual throughput exceeds the forecast throughput. GGT made detailed submissions regarding all of these matters, including a submission that there was no need for a trigger mechanism relating to the throughput volumes of gas on the basis that significant increases could not occur without substantial capital investment. GGT also submitted that, pursuant to section 3.18 of the Code, trigger mechanisms should only address errors in forecasting of gas loads transported through the GGP and that the intent of the Code is that trigger mechanisms should only be included where the Access Arrangement Period is in excess of 5 years (the proposed Access Arrangement is not in excess of 5 years).

688. The Authority does not accept that GGT's interpretation of section 3.18 of the Code is correct. Section 3.17 of the Code empowers the Authority to require that the Access Arrangement include specific major events as trigger mechanisms if it considers it necessary, having regard to the objectives in section 8.1 of the Code. In the view of the Authority, there is nothing in section 3.18 of the Code which would confine the power given to the Authority in section 3.17 to considering errors in forecasting of gas loads transported through the GGP as trigger events and only where the Access Arrangement Period is in excess of 5 years.

689. The Authority has considered whether the proposed Access Arrangement should include additional trigger mechanisms, taking into account the prospect for changes in the cost and pipeline-utilisation parameters that underlie the calculation of the Reference Tariff. The Authority accepts that the GGP is being operated at close to current capacity and that investment would need to occur before a significant increase in throughput could be achieved. In the Authority's view, this is a matter weighing against a trigger mechanism where realised quantities of gas throughput significantly exceed the forecast quantities that were the basis for determining Reference Tariffs.

690. The Authority has also weighed various other relevant objectives, including limiting the potential for windfall profits due to potential errors in forecasts, maintaining incentives for market development and the potential for such a mechanism to create regulatory uncertainty, particularly if there was a lengthy review of the entire Access Arrangement.

691. The Authority is not satisfied that there is any prospect of significant changes in the cost and pipeline-utilisation parameters that underlie the calculation of the Reference Tariff. Taking this into account, together with the absence of any proposal for the Access Arrangement period to be in excess of five years, the Authority does not consider it necessary for the Access Arrangement to include any provisions that would trigger a requirement for review of the Access Arrangement prior to the Revisions Submission Date.

Other Non-Tariff Issues

692. Section 2.24 of the Code requires that an Access Arrangement contain the elements and satisfy the principles set out in sections 3.1 to 3.20 of the Code. However, it is open to a Service Provider to address in an Access Arrangement matters beyond the requirements set out in those sections of the Code.

693. Pursuant to section 2.24 of the Code, the Authority must not refuse to approve a proposed Access Arrangement solely for the reason that it does not address a matter that sections 3.1 to 3.20 of the Code do not require to be addressed. However, if a proposed Access Arrangement addresses matters in addition to the requirements in sections 3.1 to 3.20 of the Code, then the Authority may consider these matters in its assessment of the proposed Access Arrangement, taking into account the factors listed in section 2.24 of the Code.

694. The proposed Access Arrangement addresses several matters outside the scope of sections 3.1 to 3.20 of the Code. The Authority has considered these matters and matters which could also be included in the proposed Access Arrangement, in particular:

- the procedure for lodgement of an access request;
- ring fencing requirements; and
- inclusion of key performance indicators in the Access Arrangement Information.

Procedure for Lodgement of an Access Request

695. Clause 6 of the proposed Access Arrangement sets out the procedure for an application for a Service, paraphrased as follows.

- The Prospective User completes an Enquiry Form outlining the amount of gas required, number of Outlet Points and other information related to the User.
- Within 15 business days of receiving the Enquiry Form, GGT provides the Prospective User with an assessment of the availability of capacity to satisfy the request for Service, including a statement of Spare Capacity and Developable Capacity and the various tariffs and charges that will apply.
- If the Prospective User wishes to proceed, the Prospective User is required to complete and return an Order Form within 10 business days, containing a repeat of the information required in the Enquiry Form, any requirements which have changed and the tariff and charge components advised by GGT that will apply.

- Within 30 business days of receiving the Order Form GGT is required to advise the Prospective User whether Spare Capacity exists or provide details relating to Developable Capacity or investigations if these are required.

- Subject to conditions detailed in clauses 6.5 to 6.7 of the Access Arrangement, GGT must accept the completed Order Form. These clauses include conditions precedent that sufficient Spare Capacity is available or if not, it is technically and economically feasible to develop Spare Capacity and that the Prospective User has indicated its preparedness to devote reasonable costs towards investigations and Developable Capacity.

- If, in the reasonable opinion of GGT, the Order Form does not comply then GGT must give the Prospective User, within 14 days, a notice of non-compliance including reasonable details and information regarding the non-compliance.

- If GGT issues a notice of non-compliance, the Prospective User may within 30 days issue a notice that it will amend its Order Form, or else it will lose its priority for capacity.

- If the Order Form complies, GGT can make a decision relating to the provision of the Service. Within 14 days of making the decision, GGT must deliver to the User a Service Agreement, together with the likely "**Commencement Date**".

696. Users may request an increase in MDQ or a term extension to the Service Agreement at any time after the Commencement Date by writing to GGT. Any such request is treated as a "New Order Form" by GGT.

697. The User may also seek variations to the General Terms and Conditions applicable to the Reference Service, but such variations would constitute a negotiated Service, with the terms of the agreement to be negotiated in good faith.

698. Submissions were made to the Authority suggesting that the Authority consider the scope of the ability of GGT to request additional information in an Access Request, in particular the broad requirement on a Prospective User to keep confidential any information disclosed to it by GGT through the course of an application for a Service. A submission was made that such a broad requirement should not be used to stifle negotiations or arbitrations between a Prospective User and GGT.

699. Clause 6.12 of the proposed Access Arrangement gives GGT discretion "to require the Prospective User to undertake to keep confidential any information disclosed in the course of negotiations relating to the application in such a form as GGT requires and as a condition precedent to negotiations."

700. Clause 6.12 appears to prevent a Prospective User from disclosing information in furtherance of the pursuit of enforcing or complying with its legal rights, for example by way of arbitration or court proceedings. However, such an interpretation of this clause would cause the clause to be void, for reason that it could obstruct the administration of justice. For the purpose of clarity, the Authority considers that clause 6.12 should be amended to clarify the circumstances in which GGT may require a Prospective User to keep information confidential.

Ring Fencing

701. The proposed Access Arrangement does not address issues of the ring fencing of businesses with interests in the GGP. However, a submission was made to the Authority requesting that the Authority consider whether it was appropriate for the proposed Access Arrangement to include provisions relating to ring fencing.

702. Section 4 of the Code sets out various obligations on a Service Provider designed to ensure that the Service Provider's business of providing Services using a Covered Pipeline are ring fenced. There is also power in section 4 for the Authority to require the Service Provider to meet additional ring fencing obligations. However, it is not a requirement of the Code that any issues regarding ring fencing be addressed by an Access Arrangement.

Key Performance Indicators

703. Section 2.7 of the Code requires that Access Arrangement Information must include at least the categories of information described in Attachment A to the Code. Category 6 of Attachment A requires the inclusion of key performance indicators, being industry key performance indicators used by the Service Provider to justify "reasonably incurred" costs and a Service Provider's key performance indicators for each pricing zone, Service or category of asset.

704. The Access Arrangement Information submitted by GGT provided key performance indicators in the form of unit cost comparisons with other pipelines.

705. Submissions made to the Authority expressed the view that the key performance indicator information provided by GGT is very limited and that GGT should supply sufficient information on performance indicators so that Users could form a reasonable view of the competitiveness of the proposed tariffs and to ensure that GGT performs at a "best practice" level.

706. GGT submitted that it was difficult to develop meaningful performance indicators for a pipeline such as the GGP and that the use of key performance indicators for comparisons between transmission pipelines and gas distribution networks was inappropriate as they provide little (if any) relevant or useful guidance. However, GGT also submitted that, whilst it was inappropriate and unreasonable to require it to include any additional key performance indicators at this point in time, GGT was willing to work with the Authority and industry to develop appropriate key performance indicators in due course.

707. The Authority accepts that it is desirable that an Access Arrangement Information include appropriate benchmarks in the form of key performance indicators to enable, as far as possible, an assessment of whether GGT is performing adequately and at best practice level. However, work is still progressing in Australia towards the development of appropriate benchmarks and key performance indicators for gas pipelines and other regulated industries.[101]

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[101] See for example the two discussion papers on benchmarking and incentive regulation prepared through the Utility Regulator's Forum chaired by the ACCC being "The Role of Benchmarking in Incentive Regulation: An

708. Further, the Code does not provide for the Authority to seek, through the vehicle of a Draft or Final Decision, revisions to the Access Arrangement Information. Rather, the requirements for an Access Arrangement Information are set out in Attachment A of the Code, and pursuant to sections 2.6 to 2.8 of the Code the Authority considers whether the Access Arrangement Information meets these requirements, and may request the Service Provider to revise the Access Arrangement Information, outside of the process of issuing a Draft or Final Decision.

709. The Authority has indicated in this Amended Draft Decision that it may further consider cost and throughput forecasts in relation to possible approval of an Access Arrangement Period extending to 31 December 2009 (paragraph 676 and following). The Authority expects to give further consideration to a requirement for GGT to revise its Access Arrangement Information as part of any such consideration.

REQUIRED AMENDMENTS

710. Under section 2.13 of the Code the Authority is required, when issuing a Draft Decision that proposes to not approve a proposed Access Arrangement, to state amendments that would have to be made to the Access Arrangement in order for the Authority to approve it. Set out below are the amendments that should be made to GGT's proposed Access Arrangement in order for the Authority to approve it.

General Amendments

711. The definition of "Spare Capacity" in the proposed Access Arrangement should be amended to provide that Spare Capacity will only include the "Initial Committed Capacity" (as defined under clause 8 of the State Agreement) to the extent that it does not deprive any person of an existing contractual right. (Amendment 1)

Services Policy

712. The proposed Access Arrangement should be amended to make provision for an additional Reference Service in the nature of that proposed by GGT but which is capable of accommodating alternative and multiple Inlet Points in a single Service Agreement in the event that additional Inlet Points are established on the Pipeline. (Amendment 2)

Reference Tariff and Reference Tariff Policy

713. The Reference Tariff should be revised to be as follows for the year 2000 in an Access Arrangement Period of 1 January 2000 to 31 December 2005 (Amendment 3):

ACCC perspective", 22 July 1999 and "Incentive Regulation, Benchmarking and Utility Performance" November 2000.

Contract Duration	Toll ($/GJ of Contracted MDQ)	Capacity Reservation ($/GJ of Contracted MDQ/km)	Throughput ($/GJ km of Throughput/km)
1 – 5 years	0.238058	0.001372	0.000402
6 – 10 years	0.218220	0.001257	0.000368
11 – 15 years	0.208301	0.001200	0.000352
16 – 20 years	0.198382	0.001143	0.000335

and reflecting the following.

- An Initial Capital Base of $480 million as at 31 December 1999, including a value of working capital of $1.3 million.
- A nominal pre-tax Rate of Return of 10.81 percent.
- Forecast Non Capital Costs as follows (nominal $million).

Year ending 31 December	2000	2001	2002	2003	2004	2005
Total Non Capital Costs	9.37	10.56	12.14	15.19	12.56	12.88

- A present value of Total Revenue (with a discount rate equal to nominal pre-tax Rate of Return of 10.81 percent) of $320.67 million in dollar values at 31 December 1999.

714. Clause 9.8 of the General Terms and Conditions should be amended to provide a formula for escalation of the component charges of the Reference Tariff to be as follows. (Amendment 4)

$$C_t = C_{t-1} \times \left(\frac{CPI_{t-1}}{CPI_{t-2}} - X \right)$$

C_t is the relevant charge in the year t ;

C_{t-1} is the relevant charge in the year preceding year t ;

CPI_{t-1} is the Consumer Price Index (CPI) for the September quarter of the year prior to year t ;

CPI_{t-2} is the Consumer Price Index (CPI) for the September quarter of the year two years prior to year t ; and

X is 0.0275 when t is the year 2001 and is zero otherwise.

Terms and Conditions

715. Clause 8.2(b) of the proposed Access Arrangement should be amended to remove GGT's discretionary power to attach additional conditions to a Service Agreement for

provision of Reference Services, other than those conditions stated in the Access Arrangement, including in Appendix 3 of the Access Arrangement. (Amendment 5)

716. Clause 3.2 (d) of the General Terms and Conditions should be amended to the effect that if the parties to the Service Agreement are not able to agree on deferring the Commencement Date or a reduction in the scope of the Service, they may either terminate the Service Agreements by mutual consent or refer the matter for dispute resolution as provided for in clause 22 of the General Terms and Conditions. (Amendment 6)

717. Clause 6.6 of the General Terms and Conditions should be amended to explicitly allow Users, as well as third parties, to operate and maintain their own Outlet Points. (Amendment 7)

718. The Second Schedule of the General Terms and Conditions should be amended to recognise that the requirement for Users to supply spare parts applies only where the Outlet Facilities are owned by Users but operated by GGT. (Amendment 8)

719. The proposed Access Arrangement and General Terms and Conditions should be amended to provide that the Accumulated Imbalance Charge, Daily Overrun Charge, Hourly Overrun Charge and Variation Charge may be imposed only where:

(a) the conduct contemplated by those charges causes actual pecuniary loss or damage; or

(b) in the reasonable opinion of the pipeline operator the conduct contemplated by those penalties exposes the pipeline to a significant risk (whether or not that risk becomes manifest) that threatens the integrity of the pipeline. (Amendment 9)

720. The proposed Access Arrangement should be amended so that 95 percent of revenue generated from the application of Quantity Variation Charges is rebatable as if these charges are in relation to rebatable Services within the meaning of the Code. (Amendment 10)

721. Clause 7 of the General Terms and Conditions and clause 5 of the Sixth Schedule to the General Terms and Conditions should be amended to remove provision for GGT to change the tolerance limits applicable to the Accumulated Imbalance Charge and Variance Charge, and the rates of Quantity Variation Charges. (Amendment 11)

722. Clause 7 and/or the Sixth Schedule of the General Terms and Conditions should be amended so that the Accumulated Imbalance Charge does not apply in respect of the amount of the tolerance allowed. (Amendment 12)

723. Clauses 7.3 and 7.4 of the General Terms and Conditions and clause 5 of the Sixth Schedule to the General Terms and Conditions should be amended so that the Daily Overrun Charge and Hourly Overrun Charge applies only in respect of overrun at Outlet Points. (Amendment 13)

724. Clause 7.5 of the General Terms and Conditions should be amended to indicate that the Variance Charge will only apply in cases where the Variance Tolerance is

exceeded as a result of a failure by the User to make nominations in good faith. (Amendment 14)

725. Clause 7 and/or the Sixth Schedule of the General Terms and Conditions should be amended so that the Variance Charge does not apply in respect of the amount of the tolerance allowed. (Amendment 15)

726. The proposed Access Arrangement should be amended to make provision, to the extent reasonably practicable, for User-specific information to be available to Users on a timely basis sufficient for the User to assess potential liability for Quantity Variation Charges and take action to avoid the charges. (Amendment 16)

727. Clause 8.2 (alternatively clause 8.3(b)) of the General Terms and Conditions should be amended to specify that GGT will consult Users and give Users at least 30 days notice when planned maintenance is likely to interrupt their Services. (Amendment 17)

728. The Access Arrangement and General Terms and Conditions should be amended to establish an obligation for GGT to provide Users with information on the quantity of Used Gas and the price(s) paid by GGT for the purchase of gas for system-use purposes. (Amendment 18)

729. Clauses 9.9 and 9.11 of the General Terms and Conditions should be amended to remove provision for the pass through of tax imposts on GGT either as a charge in addition to the Reference Tariff or as an adjustment to the Reference Tariff, or GGT's Access Arrangement should be amended to provide a relevant mechanism for adjustment of the Reference Tariff in accordance with the provisions of section 8.3 to 8.3H of the Code. (Amendment 19)

730. Clauses 9 (and clauses 17 and 18, as necessary) of the General Terms and Conditions should be amended to provide for the waiving of charges in circumstances of, and to the extent that, interruption of Services occurs. These circumstances should include interruptions to Services arising by virtue of maintenance requirements where GGT has not given at least 30 days notice of the interruption, and interruptions occurring as a result of a *force majeure* event where GGT is the party claiming the benefit of *force majeure*. (Amendment 20)

731. Clause 9 of the General Terms and Conditions should be amended to provide for the waiving of User liabilities for the Accumulated Imbalance Charge and the Variance Charge where the liabilities are incurred as a result of Service interruptions. (Amendment 21)

732. Clause 9.13 of the General Terms and Conditions should be amended to specify a reasonable basis on which a bond, deposit or other surety is determined and to provide for that value to be decreased where there is a decrease in the User's MDQ, on a basis similar to that for determining increases in the value where there is an increase in the User's MDQ. (Amendment 22)

733. Clause 12.1(m) of the General Terms and Conditions should be amended so as to not prevent a User from entering into contractual arrangements with third parties in which the User guarantees a continuous supply of gas to another person. (Amendment 23)

734. Clause 13.5 of the General Terms and Conditions should be amended to allow for the non-payment of disputed invoices, or the non-payment of the disputed portion of an invoice, in instances of a manifest error in the invoice. (Amendment 24)

735. The General Terms and Conditions should be amended so that provisions for termination of a Service Agreement are the same for both the User and the Service Provider and the owners of the GGP. A reasonable period of time must be provided for all parties to remedy or remove the cause or causes of default before a Service Agreement can be terminated. (Amendment 25)

736. Clause 18 of the General Terms and Conditions should be amended so that any limits on liability or other conditions relating to liability should apply to both the Service Provider and User. (Amendment 26)

737. Clause 18.3 of the General Terms and Conditions should be amended so that the clause does not require a User to indemnify:

(a) the Owners;

(b) GGT;

(c) any related entity to the Owners or GGT; or

(d) the employees, agents or servants of the parties listed in (a), (b) and (c) above. (Amendment 27)

738. Clause 18.5 of the General Terms and Conditions should be amended to remove the requirement for a User to make application for a refund or credit of fixed charges. (Amendment 28)

Trading Policy

739. Clause 9 of the proposed Access Arrangement should be amended so that provisions for the trading of capacity, as currently set out in clause 20 of the General Terms and Conditions, apply generally to all Services provided by the GGP. (Amendment 29)

740. Clause 20.6(b) of the General Terms and Conditions should be amended so that the information required to be supplied by a User to GGT in the case of a Bare Transfer is consistent with the requirements of section 3.10 of the Code. (Amendment 30)

Queuing Policy

741. The proposed Access Arrangement should be amended to clarify that a User is able to enter into a contract with GGT that provides the User with an option to extend the term of the contract and/or provide for an increase in contracted capacity without either the extension of term or the increase in capacity being subject to the queuing provisions. (Amendment 31)

Extensions/Expansions Policy

742. 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)

743. Clause 10.2(a) of the proposed Access Arrangement should be amended to remove the requirement for any commitment by a Prospective User to make a contribution to the costs of installing Developable Capacity before the investigations as to the extent of those costs have been completed. (Amendment 33)

744. Clause 10.4 is to be amended to state that the application of any Surcharge is subject to the Service Provider notifying the Authority in accordance with section 8.25 of the Code. (Amendment 34)

Review and Expiry of the Access Arrangement

745. Clause 3.2 of the proposed Access Arrangement is to be amended to provide for a Revisions Submission Date of 1 April 2005 and a Revisions Commencement Date of 1 January 2006. (Amendment 35)

Other Non-Tariff Issues

746. Clause 6.12 of the proposed Access Arrangement is to be amended to indicate that GGT cannot require a Prospective User to keep confidential information disclosed by GGT to the Prospective User in the course of an application for a Service in a manner that may obstruct the administration of justice (including any proceedings under section 6 of the Code). (Amendment 36)

APPPENDIX A

Australian Competition Tribunal Review in Relation to the Moomba to Sydney Pipeline

A1. During preparation of this Amended Draft Decision, the Australian Competition Tribunal ("**Tribunal**") handed down its decision ("**EAPL Decision**"[102]) in respect of its review of the decision of the ACCC to approve its own Access Arrangement in relation to the Moomba to Sydney Pipeline. In this decision, the Tribunal set aside the ACCC's determination in respect of the Initial Capital Base for the Moomba to Sydney Pipeline.

A2. In the EAPL Decision, the Tribunal decided that the Epic Decision should be confined to the facts of that case and provided no guidance for the EAPL Decision. In setting aside the ACCC's determination on the Initial Capital Base, the Tribunal indicated that values determined under sections 8.10(a), 8.10(b) and 8.10(c) of the Code (i.e. values determined by DAC, DORC and other recognised methodologies) would normally set the range of values within which a value for the Initial Capital Base is selected. The other factors in section 8.10 could assist in the choice of methodology or lead to an adjustment of the chosen methodology.

A3. The process contemplated by the Tribunal for consideration of the Initial Capital Base is inconsistent with the Epic Decision where Parker J, with whom Malcolm CJ and Anderson J agreed, held that section 8.10 of the Code sets out a series of factors which the relevant regulator must consider in arriving at an Initial Capital Base. Choosing a particular methodology was considered by Parker J to be inconsistent with the relevant regulator considering the factors in section 8.10 and exercising its discretion.

A4. The Tribunal did not provide a reasoned basis for adopting a different construction of the Code to that adopted by the Court in the Epic Decision.

A5. The Authority is unable to see how the reasoning of the Court in the Epic Decision is to be confined to its facts. It contains a detailed analysis by the Full Court of the Supreme Court of Western Australia as to the proper construction of the very legislation under which the Authority is required to act. It considers the context in which the legislation was enacted and reviews the extent to which it reflects economic principles. The result is that the Authority is faced with a conflict between the Epic Decision and the decision of the Tribunal.

A6. In the circumstances, the Authority is of the view that the Epic Decision, which considered the construction of the Code as applied by the *Gas Pipelines Access (Western Australia) Act 1998*, should be applied and the Authority's reasoning in this Amended Draft Decision seeks to reflect the Court's approach in the Epic Decision. In reaching this conclusion the Authority has been guided by the decision of the High Court in *Australian Securities Commission v Marlborough Gold Mines Limited*[103] to the effect that a court, even a court of appeal in another state, should not depart from a

[102] *Application by East Australian Pipeline Limited* [2004] ACompT 8.

[103] (1993) 177 CLR 485.

reasoned decision of a superior appeal court in one state in relation to a national code unless it is satisfied that the decision was clearly wrong (see also *ASIC v Karl Suleman Enterprises Pty Ltd* (2003) 45 ACSR 401 at 405). The Authority has formed the view that, in those circumstances, it would not be appropriate for the Authority, as an administrative decision-maker, to consider whether the decision of the Tribunal is to be preferred to that of the Full Court in the Epic Decision. Rather, the Authority should simply apply the decision of the Full Court.

APPPENDIX B

Asset Valuation by the Calculation of Capital Recovery

B1. The calculation of capital recovery can be undertaken in either nominal (i.e. historical cost) terms, or in real terms:

- for a nominal calculation, all variables are defined at their historical cost (i.e. not adjusted for inflation) and a benchmark rate of return (or weighted average cost of capital, "**WACC**") expressed in nominal terms is used; and
- for a real calculation, all variables are defined in constant dollar values (i.e. adjusted for inflation so that they all reflect the purchasing power of money at a single point in time) and a WACC expressed in real terms is used.

B2. Residual asset values derived by nominal and real calculations will differ if actual inflation differs from the level of inflation that was expected and taken into account in specification of the WACC.

- Under a nominal calculation, capital recovery is calculated using a nominal WACC and a rate of inflation explicitly or implicitly assumed in this nominal WACC. The asset owner incurs a loss if inflation is higher than the level of inflation assumed in the nominal WACC, and gains if inflation is lower than the level of inflation assumed in the nominal WACC.
- Under a real calculation, the asset owner is compensated for actual inflation, and the real return to the asset owner is preserved, irrespective of the level of actual inflation.

B3. There are a number of other methodological issues of importance in a model of capital recovery.

- Tariffs paid by the initial joint venturers – the tariffs assumed to be paid by the initial joint venturers (who were also the only foundation Users) will have a significant effect on the assumed historical revenues and the calculated capital recovery. The Authority understands that GGT has calculated historical revenue from the initial joint venturers on the assumption that these shippers have paid the A1 Tariff for the whole of the history of pipeline use, justifying this approach by reference to Principle 2 of the Tariff Setting Principles established under the State Agreement, i.e. that the initial joint venturers of the GGP will be ascribed a notional tariff based on third-party tariffs for their utilisation of pipeline capacity reserved to the initial joint venturers pursuant to clause 8(1) of the State Agreement. At least for the period prior to the initial joint venturers selling their respective interests in the GGP (approximately the end of 1998), alternative assumptions about their tariffs are possible (as the tariffs are merely notional).
  - The foundation shippers paid the A1 Tariff less 7.5 percent – reflecting a discount offered in an "open season" to foundation shippers, although no third-party shippers took up this offer.

- The notional tariffs paid by the initial owners decreased in line with discounts to the A1 Tariff offered from 1998 (the A2, A3 and A4 Tariffs).

B4. Information provided to the Authority by GGT indicates that GGT was aware of the option to calculate notional revenues on the basis of discounted tariffs (both the 7.5 percent discount for foundation Users and the A2, A3 and A4 Tariffs) – which would be consistent with the provisions of Tariff Setting Principle 12 that require all parties to benefit from any reduction to the tariff applying to any one party, other than the 7.5 percent open season tariff established for foundation Users. Indeed, information provided by GGT to the Authority suggests that GGT explicitly contemplated calculating notional revenues on the basis of these discounts, but chose to specify notional revenues to reflect "undiscounted" tariffs.

B5. Methodological issues aside, input parameters to the capital-recovery calculation comprise:

- revenues, including assumptions as to revenues from the original owners and foundation Users;
- capital expenditure;
- working capital;
- benchmark rate of return; and
- operating expenditure.

B6. GGT has provided the Authority with hard-copy information on the assumed values of these parameters. The Authority has sought to verify this information by obtaining further information from GGT, the initial joint venturers in the GGP, current Users of the GGP and the Department of Industry and Resources (which incorporates the former Department of Resources Development). Information obtained through the powers of the Authority under section 41 of Schedule 1 to the *Gas Pipelines Access (Western Australia) Act 1998* was as follows.

- Information from GGT on the historical cost of the GGP; capital and operating expenditure; revenue; throughput; details of rate of return calculations; historical tariffs applying to each User; forecast throughput; forecast capital and operating expenditure; documents relating to the setting of initial third-party tariffs (the A1 Tariff) in 1994 and a subsequent review of these tariffs in 1997/98 ("1998 tariff review").
- Tariff models and model data of the then Department of Resources Development, used in the Department's assessment of the original tariffs for the GGP and discounted tariffs introduced from 1998, including consultants' reports to the Department on rates of return and tariffs.
- Historical contracted capacity and throughput for each User of the GGP.
- Forecasts of contracted capacity and throughput from and for each User of the GGP, including details of prospective future contracts currently under negotiation.

- Documents of the initial joint venturers of the GGP (BHP Minerals Pty Ltd, Normandy Pipelines Pty Ltd and Wesminco Oil Pty Ltd) relating to the initial joint venture arrangements, decisions to undertake the GGP project, cost-sharing and tariff arrangements for the initial joint venturers, and tariff proposals put to the Minister for Resources Development.

B7. Taking into account the above information, comments are made below on inputs that GGT has used in its model.

Rate of Return

B8. A significant issue in applying a capital-recovery calculation is the value or values ascribed to the historical rate of return (i.e. the WACC), relative to which capital recovery is determined. There are a number of different assumptions that may be made relating in part to different time periods since commencement of construction of the GGP.

B9. The time period since the commencement of construction of the GGP may be divided into four sub-periods for the purposes of considering the historical rate of return:

- from the commencement of construction to 31 December 1997, reflecting the commencement of the construction project to a time of review of pipeline tariffs by GGT;

- 1 January 1998 to 31 December 1999, reflecting the period from the review of pipeline tariffs to the application of the National Gas Code to the GGP and the commencement date of an Access Arrangement that was intended when the Western Australia Government became a signatory of the National Gas Pipelines Agreement;

- 1 January 2000 to 31 December 2001 – reflecting the period after 1 January 2000 during which the National Gas Code has applied to the GGP and during which time an Access Arrangement for the GGP was intended to be in existence, and during which GGT continued to charge third-party Users the reduced tariffs (i.e. tariffs less than the A1 Tariff); and

- 1 January 2002 to the date of commencement of the Access Arrangement – reflecting the period after 1 January 2002 during which the National Gas Code has been in effect and during which time an Access Arrangement for the GGP was intended to be in existence, but during which GGT reverted to charging third-party Users the A1 Tariff.[104]

B10. Some history of tariff setting under the State Agreement is necessary to understand the separation of the first two sub-periods at 31 December 1997.

[104] GGT re-introduced the A1 Tariff on 22 December 2001. However, the break between time periods for consideration of capital recovery is taken to be the end of the calendar year for ease of calculating capital recovery on a quarterly basis.

B11. In November 1994, the Goldfields Gas Transmission joint venturers provided the Minister for Resources Development with proposals for the construction and operation of the GGP in accordance with requirements under Clause 9 of the State Agreement.[105] These proposals included the proposed Tariff Setting Principles. Tariffs for the GGP were established in January 1995 (the A1 Tariff). The then Department of Resources Development was advised of the A1 Tariff and provided with details of the Goldfields Gas Transmission joint venturers' internal rate of return analysis based on these tariffs.

B12. In March 1998, GGT reduced third-party tariffs to approximately 85 percent of the value of the A1 Tariff (the A2 Tariff). The Authority has examined submissions made by GGT to the then Department of Resources Development in relation to this tariff reduction, and assessments of the new tariff undertaken by the Department.[106]

B13. Further discounts to tariffs were introduced from 1 July 1999 (the A3 Tariff) and 1 January 2000 (the A4 Tariff). The Authority is not aware of whether or not the introduction of these discounts to tariffs was accompanied by provision to the Minister or Department of Resources Development of information on the derivation of the tariff discounts or assumptions as to the rate of return underlying the discounted tariffs.

B14. Returning to consideration of the capital-recovery calculation and alternative assumptions that may be made in this model, there are a range of assumptions that may be made for the historical WACC for the period between 1994 and 2004. Values that may be assumed for each period range from an estimate of GGT's actual cost of capital for the GGP project, which the Authority has determined on the basis of the WACC calculated for the purposes of determining a Rate of Return for the Access Arrangement Period and which varies from 10.2 to 14.6 percent pre-tax nominal or 7.9 to 10.4 percent pre-tax real (depending upon risk-free rates and corporate tax rates in particular years), to a value of 18.81 percent (pre tax nominal, corresponding to 14.24 percent pre tax real), which GGT proposed to the Western Australian Government for the determination of third-party tariffs at the commencement of the project. There are other possible values within this range including those rates of return implied by the tariffs actually established by GGT, and rates of return recommended as appropriate for the GGP by advisers to the then Department of Resources Development.[107]

B15. For the different rate of return estimates for each period, the estimates may be applied in calculation of capital recovery in two different ways:

- WACC estimates remain fixed for each period (i.e. commencement to 31 December 1997, 1 January 1998 to 31 December 1999, 1 January 2000 to 31 December 2001 and 1 January 2002 to date of asset valuation).

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[105] Goldfields Gas Transmission, Proposal and Submissions to the Minister for Resources Development, Attachments, November 1994, Appendix B, p.1.

[106] Details of the submission and of assessments undertaken by the Department are provided in the Confidential Annexure to this Amended Draft Decision.

[107] These various rates of return are indicated in the Confidential Annexure to this Amended Draft Decision.

- WACC estimates are varied annually in each of the four periods for changes in market parameters, with the following treated as market parameters:
  - real risk-free rate;
  - nominal risk-free rate and inflation forecast; and
  - corporate tax rate.

B16. In the case of the implied returns from GGT's tariff modelling (Model–A1 and Model–A2 WACC values) – which do not correspond to an estimated WACC, but rather a WACC implied by an internal rate of return implicitly accepted by GGT – the real WACC may be treated as fixed, and the nominal WACC permitted to vary with expected inflation (calculated using the difference between nominal and real yields on bonds, using the Fisher transformation).

Revenue

B17. The Authority has sought to determine the underlying assumptions of GGT's input data on revenues and to reconcile the revenue data used by GGT with data obtained from GGT pursuant to section 41 notices.

B18. In its December 2002 submission to the Regulator, GGT provided only final figures for the notional revenue from the initial owners of the pipeline, with no descriptive information on how this notional revenue was calculated. The hard-copy of GGT's model (provided in GGT's submission of 17 December 2002) suggests that GGT derived the notional revenues by:

- calculating the revenues that would have been obtained if the initial owners had paid the headline tariff for third-party Users as discounted in stages subsequent to 1998 (the A2, A3 and A4 tariffs) and with a 7.5 percent discount to the tariff applicable at any given time reflecting the discount offered to any foundation third-party Users of the pipeline (although no third-party Users took advantage of this offer); and
- scaling up the notional revenues determined in this manner to remove the impact of the tariff discounts.

B19. Similarly, in its December 2002 submission to the Regulator, GGT provided only final figures for revenues from third-party Users. While data manipulations are not clear from the information made available, it appears that GGT scaled up the stated revenues from third-party Users to derive notional revenues based on an assumption that third-party Users always paid the original third-party tariffs (the A1 Tariff) and not the discounted tariffs introduced progressively from 1998.

B20. It is not clear why GGT elected to use notional revenue data that removed the effect of tariff discounts on both notional revenues from the initial owners of the pipeline and actual revenues derived from third-party Users. The approach taken by GGT results in a higher value of notional revenues from the initial owners and a substantial overstatement of revenues obtained from third-party Users, with a consequent higher estimate of capital recovery and a lower residual asset value at any point in time.

B21. The Authority has sought to verify the revenue data used by GGT utilising information obtained from GGT on:

- GGT's own assumptions as to historical notional revenue and revenue, divided into revenue from Toll Charges, Capacity Reservation Charges, Throughput Charges and other fees and charges; and
- information obtained pursuant to a section 41 notice on historical tariffs, MDQ and throughput for each User.

B22. Using these two sources of data, the Authority compared values of historical revenues derived from three data sources:

- assumed revenues indicated in GGT's submission of 17 December 2002;
- assumed revenues indicated in information provided to the Authority by GGT; and
- revenues calculated from data provided by GGT on historical tariffs, contracted capacities and throughputs for each User.

B23. Using the last two of these data sources the Authority has been able to verify the notional and third-party revenues to within 2 percent of the values used by GGT.

Working Capital

B24. In its calculation of capital recovery, GGT has assumed a constant value of working capital of $2.6 million for the entire post-construction period (4th quarter 1996 onwards). However, data obtained from GGT indicates actual values of working capital for many quarterly periods up to June 2002 that differ from this assumed value. The range of values reported by GGT is indicated in the Confidential Annexure to this Amended Draft Decision.

Capital Expenditure

B25. The data on capital expenditure used by GGT in its model corresponds almost exactly with data on capital expenditure obtained separately from GGT. Also, the data on capital expenditure used by GGT in its model over the period to the end of calendar year 1997 are confirmed by an independent audit report.[108] Although there are some variances, these are not material.

Operating Expenditure

B26. The data on operating expenditure used by GGT in its model are annual data converted to quarterly data by division by four. The data on operating expenditure provided separately to the Authority are actual quarterly data. As such, there are differences between the quarterly data used by GGT and the quarterly data provided separately to the Authority. There are also differences in the total value of operating expenditure over the period of modelling that cannot be explained by the derivation of

[108] This audit report is referenced in the Confidential Annexure to this Amended Draft Decision.

quarterly values, although the difference is not material ($25,000 over the period 1996 to 2002).

Calculation of the DAC Value

B27. In using a capital recovery calculation to estimate a DAC value consistent with the requirements of section 8.10(a) of the Code, the Authority has adopted the following methodological approach and assumptions.

- Calculation in real terms.

  As described in Appendix D (paragraphs D4 to D9), the original investors appear to have made the original investment decision for the GGP on the basis of projected real returns. Given this, a calculation of capital recovery in real terms is considered to reflect the basis on which the investment decision was made.

- A WACC considered by the Authority to be indicative of the cost of capital for the GGP project and estimated on the basis of the WACC calculated for the purposes of determining a Rate of Return for the Access Arrangement Period (10.81 percent pre-tax nominal) and which varies from approximately 7.5 to 10.0 percent pre-tax real (depending upon risk free rates and corporate tax rates at particular times).

- Notional revenues from initial owners determined under an assumption that the initial owners received the benefit of a 7.5 percent discount to standard tariffs in line with an offer made for foundation Users (but not taken up by any foundation Users), and received the benefit of discounted tariffs from 1998.

- Revenues from third-party Users determined under an assumption that these Users received the benefit of discounted tariffs from 1998, consistent with the revenues actually received from the third-party Users.

- Values of working capital as stated by GGT to be actual values for each quarterly period.

B28. The residual asset values calculated for a range of different valuation dates and under this methodological approach and set of assumptions are indicated in the table below.

Asset values estimated by calculation of capital recovery under a methodological approach and assumptions considered most plausible by the Authority

Valuation Date	Valuation
31 Dec 1999	$434 million
30 June 2002	$376 million
31 Dec 2003	$292 million
30 Jun 2004	$261 million

APPPENDIX C

Tariff Setting Principles Approved Under the Goldfields Gas Pipeline Agreement Act

The principles which govern tariff setting on the Pipeline (the "Principles") are as follows:

1. Tariffs will be structured to promote the use of the Pipeline.

2. Tariffs will be set to provide a commercial rate of return on all project capital, including all Owners' costs, reasonably incurred in the construction and operation of the Pipeline and to recover all reasonable Pipeline operating, maintenance and administration costs. The commercial rate of return shall be commensurate with the business risk associated with the project.

   For the purpose of this Principle, the Owners will be ascribed a notional tariff based on third party tariffs for their utilisation of Pipeline capacity reserved to the Owners pursuant to clause 8(1) of the GGP Agreement.

3. Users may be categorised into a User group on the basis of the nature of the service or the duration of the service they are seeking. Users cannot be categorised into a User group on the basis of their credit worthiness or on the basis of the volume of their capacity purchase.

4. Tariffs will not discriminate between Users in a common User group.

5. Credit support may be requested of a User, before a service contract is accepted, in the event of a genuine concern regarding User's credit worthiness.

6. A minimum account or similar charge may be made to recover the Owners' reasonable costs in regard to connection of a User to the Pipeline and contract administration.

7. Tariffs will have a capacity reservation component, and a throughput component, and will be structured to promote the utilisation of reserved capacity.

8. Tariffs will be structured to recover the capital cost of the Pipeline equitably over time.

9. Tariff differences between User groups will effect the character of the service to be provided (particularly in terms of the distance of carriage, term of the contract and whether the contract is for interruptible or firm capacity) and the time at which service contracts are entered into.

10. All Firm Transportation Service tariffs will be set by reference to the Benchmark Tariff.

11. Contracts should not set tariff caps in excess of 20 years from the execution thereof.

12. At any time when the tariffs for Pipeline services then being applied:

    do not promote the use of the Pipeline; or

    do not promote the efficient use of reserved capacity; or

    generate a rate of return to the Owners which is inconsistent with Principle (2) above, except where the Owners elect to exercise Principle (13),

    the tariffs shall be re-determined, and that re-determination shall be applied so as to ensure the Principles are satisfied. Such re-determination shall not, under any circumstances, oblige the Owners to adopt a tariff which does not satisfy Principle (2).

I Where a tariff re-determination results in a change being made to the Firm Transportation Service tariff, the new tariff shall apply, without any derogation of any existing contractual right, as far as is possible uniformly across all new and existing Firm Transportation Service contracts, and for each existing contract:

(a) if the resulting Firm Transportation Service tariff is less than the Contract Tariff (being those charges specified in the Firm Transportation Order Form submitted by the User and accepted by the Owners), then the new Firm Transportation Service tariff shall apply.

(b) if the resulting Firm Transportation Service tariff exceeds the Contract Tariff, then the Contract Tariff shall apply.

II Where a tariff re-determination results in a discount being offered on the Firm Transportation Service tariff, the discount charge shall apply, as far as is permitted by existing contracts and these Principles, and for each new and existing Firm Transportation Service contract:

(a) if the resulting discounted charge is less than the Contract Tariff then the discounted charge shall apply irrespective of whether it represents an increase or a decrease over any discounted charge for the service applicable immediately prior to the re-determination.

(b) if the discounted charge exceeds the Contract Tariff then the Contract Tariff shall apply.

Tariffs for services other than the Firm Transportation Service shall be reviewed at the time of any Firm Transportation Service tariff re-determination so as to ensure they continue to comply with the Principles.

13. Subject to compliance with all the Principles (except Principles (2) and (12)), the Owners, at their sole discretion, may set tariffs, or allow tariff to remain operative, which are equal to or less than those resulting from the application of Principle (2) and such tariffs shall be applied in a manner consistent with provisions I and II of Principle (12).

The following definitions apply to the above Principles.

"Firm Transportation Service" means an agreement between a User and the Owners to reserve Pipeline capacity on an uninterruptible basis.

"Benchmark Tariff" means the tariff applicable to a Firm Transportation Service Contract for the longest contract term not exceeding 20 years offered by the Owners to Third Parties in the Alternate General Terms and Conditions.

"Pipeline" means the Pipeline as defined in the Goldfields Gas Pipeline Agreement Act 1994.

"User" means a person contracting with the Owners to reserve capacity in the Pipeline for the purpose of transporting gas.

"Owners" means the Goldfields Gas Transmission Joint Ventures consisting of Southern Cross Pipelines Australia Pty Ltd (ACN 084 521 997), Southern Cross Pipelines (NPL) Australia Pty Ltd (CAN 085 991 948) Duke Energy WA Power Pty Ltd (CAN 058 070 689)).

Terms used in these Principles have the same meaning as they have in the respective service agreements and the Alternate General Terms and Conditions.

APPPENDIX D

Asset Valuation by the Calculation of Capital Recovery and Reflecting Past Determination of Tariffs

D1. The Authority has considered alternative assumptions in respect of the calculation of capital recovery, in relation to:

- calculation of capital recovery by a nominal or real calculation;
- the benchmark cost of capital with reference to which the recovery of capital is determined;
- whether the cost of capital is fixed over time or varied in accordance with variation in corporate taxation rates and market interest rates;
- whether notional revenues attributed to the initial owners of the pipeline are determined to reflect a 7.5 percent discount in tariffs offered to foundation Users; and
- whether notional revenues from the initial owners of the pipeline and third-party Users of the pipeline are determined to reflect a discount to tariffs introduced from 1998.

D2. The Authority has calculated capital recovery in respect of each of these matters, and assumptions in respect of each that reflect the manner in which tariffs have been determined in the past.

D3. Alternative assumptions in respect of each of these matters are addressed in turn below. In considering the alternative assumptions, the Authority has given particular consideration to the manner in which tariffs have been previously determined under the State Agreement, consistent with consideration of factors required to be considered under section 8.10(f) of the Code.

Nominal or Real Calculation

D4. The essential difference between a real (or inflation adjusted) calculation and a nominal (historical cost) calculation is what happens if actual inflation differs from the forecast – in a real calculation, investors are insulated from this inflation risk, under a nominal calculation, they bear this risk. That is, under a real calculation the investors are compensated for inflation at the actual rate at which inflation occurs. Under a nominal calculation, investors stand to make a loss if actual inflation exceeds the rate of inflation assumed in estimating the nominal WACC, and a windfall gain if actual inflation is less than the rate of inflation assumed in estimating the nominal WACC.

D5. GGT has used a nominal calculation to calculate capital recovery. In estimating a nominal WACC, GGT assumed an inflation rate of 4 percent per annum. As actual inflation over the subsequent life of the pipeline occurred at a rate less than this, GGT benefits from being compensated for inflation by an amount in excess of the actual rate of inflation, with the benefit capitalised into the residual asset value. As a

consequence, the nominal calculation gives rise to residual asset values substantially in excess of the values derived by a real calculation with an equivalent real WACC ($75 million difference at 31 December 1999 and $110 million at 30 June 2002).

D6. In considering whether this approach for determining capital recovery reflects the past determination of tariffs, the Authority has considered how inflation was intended to be treated at a price review under the Tariff Setting Principles. In particular, whether it was intended by investors that the under recovery of capital be calculated using the same nominal rate of return irrespective of the realised rate of inflation, or whether it was intended that a different nominal rate of return was intended if actual inflation differed from forecast inflation. In coming to a view on this issue, the Authority has considered documentation relating to the initial determination of third-party tariffs for the GGP in 1994, as well as the introduction of tariff discounts that occurred in 1998.

D7. All of the discussions of the 1994 tariff determination in documents of GGT and documents of advisers to the then Department of Resources Development refer to returns on investment defined in nominal terms. However, the full circumstances of GGT's tariff determination and its application suggest that a real approach was actually intended. While GGT determined the A1 tariff by a nominal calculation, in its application of the A1 Tariff the tariff charges were escalated for actual inflation, which implies that investors would be insulated from inflation risk while the tariff remained in effect. With review of the tariff in 1998, tariffs were again determined by a nominal calculation but in application the tariff was escalated for actual inflation. A real approach to estimating capital recovery would be consistent with this treatment of inflation.

D8. The information available to the Authority on how the original investors in the GGP actually made their decisions suggests that the real (rather than nominal) returns from the relevant project were more important.[109]

D9. The Authority is of the view that a real approach to calculation of capital recovery is consistent with the tariff models used by GGT under the regulatory regime put in place by the State Agreement.

Benchmark Cost of Capital

D10. In the calculation of historical capital recovery, capital recovery in any period is calculated relative to a benchmark rate of return on capital. The appropriate assumption as to the rate of return (or WACC) that reflects past setting of tariffs requires a view to be taken on the reasonable expectations of investors in the GGP in respect of the basis for setting tariffs and for considering the recovery of capital. This in turn requires a view to be taken on the meaning of relevant provisions of the State Agreement, in particular:

- whether GGT and the Government intended that tariffs established at the commencement of the project would persist indefinitely, or tariffs would be reviewed periodically;

[109] Evidence from one of the original investors in the project is referenced in the Confidential Annexure to this Amended Draft Decision.

- whether the WACC assumed for the purposes of the initial tariff determination was to be maintained at the rate established at the commencement of the pipeline project, or was to be re-estimated from time to time to comply with the Tariff Setting Principles; and

- whether the Government actually had the power to require tariffs to be reset to incorporate a WACC that reflects a market cost of capital, and changes in the market cost of capital.

D11. The Authority has considered documents relating to the past determination of tariffs for the GGP, including determinations of rates of return either underlying tariff proposals or expected under tariffs actually put in place.[110]

D12. Given this background, the Authority has formed the following views on the WACC value that reflects the past determination of tariffs.

- For the period from commencement of construction of the pipeline (1994) to 31 December 1997, it is appropriate to assume a WACC value corresponding to the rate of return that GGT assumed in its tariff model as the appropriate WACC for that period. This WACC value reflects GGT's actual expectations, as evidenced by the financial model used to determine tariffs.

- For the period 1 January 1998 to 31 December 1999, it is appropriate to assume a WACC value corresponding to the return implied by GGT's financial model used to determine tariff discounts. Again, this WACC value reflects GGT's actual expectations as evidenced by the financial model used to determine tariffs. The Government had advice that the WACC estimates were excessive, but did not pursue a lower value and a correspondingly lower tariff.

- For any period after 31 December 1999, it is appropriate to assume a WACC based on GGT's expectations for this period being either the continued use of either the WACC that GGT assumed in its financial model used to determine tariff discounts (for the period to December 2001), or financial model used to determine the A1 Tariff (for the period after December 2001).

Fixed or Variable Benchmark Cost of Capital

D13. A fixed WACC implies that investors bear the risk of changes in market parameters that affect the cost of capital. That is, if market variables (especially market interest rates) change so as to increase the cost of capital above the existing benchmark, the investors would incur a loss as the resultant higher cost of capital is not taken into account in calculating capital recovery. Conversely, if market variables change so as to reduce the cost of capital below the existing benchmark, investors would stand to make a windfall gain as the model would underestimate the recovery of capital and produce a higher residual asset value.

[110] Documents considered and relevant details of the past determination of tariffs and rates of return are indicated in the Confidential Annexure to this Amended Draft Decision.

D14. The Authority is of the view that the expectation of GGT under the State Agreement was for a commercial rate of return (which may vary from time to time), rather than a possible capture of windfall gains (or suffering of windfall losses) from deviation of market parameters and taxation rates from those assumed in an original WACC estimate. The fact that GGT originally estimated a WACC using the CAPM is evidence of an understanding of the original joint venturers that the cost of capital is dependent, in part, on such variables and would change if the values of these variables changed. That said, however, it is only possible to vary the WACC estimate for changes in market variables and taxation rates where the WACC estimate is derived by the CAPM model. As noted above (paragraph D12) the Authority is of the view that the appropriate benchmark rate of return to be assumed in the capital-recovery calculation is that implied by the internal rate of return of GGT's financial model used to determine tariffs. As this rate of return was not determined by use of the CAPM model, it is not possible to make adjustments for variation in market parameters.

Revenue and Discounted Tariffs

D15. To calculate capital recovery, it is necessary to determine values of revenues obtained from Users of the GGP, including the original joint venturers and other third-party Users.

D16. In relation to revenue assumed to have been obtained from the original joint venturers in the GGP, the second principle of the Tariff Setting Principles states that:

> For the purpose of this Principle, the Owners will be ascribed a notional tariff based on third party tariffs for their utilisation of Pipeline capacity reserved to the Owners pursuant to clause 8(1) of the GGP Agreement.

D17. In its calculation of capital recovery, GGT has assumed that the initial owners of the pipeline paid the headline third-party tariff (the A1 Tariff). However, as the initial owners were also foundation Users, they would, if having obtained access as third-party Users, have been eligible for a 7.5 per cent discount to the headline tariff that was offered to all foundation Users (although none took it up). GGT could have argued that the initial owners should have been assumed to be paying this discounted tariff, and notional revenue calculated on this basis, resulting in lower capital recovery and a higher residual asset value.

D18. GGT has also assumed that the initial owners and third-party Users have paid the A1 Tariff since commencement of operation of the GGP, and did not receive the benefit of discounted tariffs introduced in 1998. GGT could have argued that notional revenues for the initial owners should have been determined on the basis of the discounted tariffs after March 1998. Moreover, third-party Users would have paid the discounted tariffs. As such, GGT's calculation of capital recovery incorporates only notional revenues from third parties that overstate actual revenues, with a correspondingly higher estimated capital recovery and a lower residual asset value.

D19. The Authority is of the view that the methodology for determining revenues based on tariffs without discounts that applied from time to time is inconsistent with the requirements of the Tariff Setting Principles to take into account notional revenues from the original joint venturers, and inconsistent with the concept of the capital-

recovery calculation in not properly taking into account actual revenues from third-party Users.

Summary of Assumptions and Asset Valuation

D20. Taking into account the discussion of principal assumptions for estimation of capital recovery as set out above, the Authority has calculated capital recovery and residual asset value using a capital-recovery calculation similar to that of GGT, but with differences in methodology and assumptions as follows:

- calculation in real dollar values;
- calculation of capital recovery with reference to benchmark real rates of return reflecting rates of return implied by the tariffs actually put in place for the GGP;[111]
- estimation of revenues on assumptions of the original joint venturers having received the benefit of 7.5 percent discount on tariffs made available to foundation shippers, and both the original joint venturers and third-party Users having received the benefit of tariff discounts introduced in 1998; and
- values of working capital as stated by GGT to be actual or forecast values for each quarterly period.

D21. On the basis of these assumptions, the Authority has estimated residual asset values for the GGP consistent with the past determination of tariffs as follows for a range of valuation dates.

Asset Values Estimated by Calculation of Capital Recovery under a Methodological Approach and Assumptions considered by the Authority to reflect past determination of tariffs

Valuation Date	Valuation
31 Dec 1999	$495 million
30 June 2002	$501 million
31 Dec 2003	$474 million
30 Jun 2004	$465 million

[111] The values of the rates of return are indicated in the Confidential Annexure to this Amended Draft Decision.