Issues Paper on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement

3 November 2014

Economic Regulation Authority
WESTERN AUSTRALIA

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Key Points

1. On 15 August 2014, Goldfields Gas Transmission Pty Ltd (**GGT**) submitted to the Economic Regulation Authority (**Authority**) proposed revisions to the access arrangement for the Goldfields Gas Pipeline (**GGP**). The proposed revised access arrangement covers the period 1 January 2015 to 31 December 2019 (herein referred to as **AA3**, or the third access arrangement period). The proposed revised access arrangement is applicable to the covered pipeline, which excludes uncovered expansions of the GGP.

2. The role of the Authority is to approve or not approve the proposed access arrangement revisions in accordance with the requirements of the National Gas Law (**NGL**) and National Gas Rules (**NGR**). GGP's first access arrangement and revisions to the GGP access arrangement for the second access arrangement period were considered under the *National Third Party Access Code for National Pipeline Systems* (**Code**).

3. The Authority has identified a number of specific issues in relation to GGT's proposed revised access arrangement for the third access arrangement period. However, parties are also invited to make submissions on any matters in the GGT proposal. The specific issues identified include:

    - GGT allocation of costs between covered (regulated) and uncovered (unregulated) users. GGT allocates standalone costs to the users of the covered pipeline. GGT only allocates direct capital, operating and maintenance costs of the uncovered components of the pipeline to the users of the uncovered capacity of the pipeline.
    - The proposed rate of return approach yields a nominal post-tax Weighted Average Cost of Capital (**WACC**) of 9.64 per cent. GGT's approach departs from the Authority's Rate of Return Guidelines in a number of areas.
    - GGT calculates the depreciation of the projected capital base using Historic Cost Accounting, with nominal straight line depreciation.
    - GGT has estimated the cost of income tax by multiplying an estimate of annual taxable income by the expected income tax rate. GGT has estimated the Tax Asset Base using the historical costs of GGP assets that may be depreciated for tax purposes, and has calculated tax depreciation using a straight line method and asset lives as determined by the Australian Taxation Office.

Introduction

4. On 15 August 2014, GGT submitted its proposed revised access arrangement, access arrangement information and access arrangement supporting information for the GGP to the Authority. The proposed revised access arrangement, access arrangement information and access arrangement supporting information (except for confidential information which is redacted) are available on the Authority's website.

5. The Authority notes that the current access arrangement has a review submission date of 1 January 2014 meaning that GGT would have had to lodge its access

arrangement proposal to the Authority on or before this date.[1] However, as a result of the amendment to rule 87 of the NGR by the Australian Energy Market Commission (**AEMC**) in 2012, the Authority was required to exercise its power under rule 52(3) to extend the period for GGT to submit its access arrangement proposal. Furthermore, clause 35 of schedule 1 to the NGR, extended the period for GGT to submit its access arrangement proposal to six months after the date the Authority's Rate of Return Guidelines was published. A notice to this effect was published concurrently with the Authority's Rate of Return Guidelines on 16 December 2013.[2]

6. On 13 June 2014, the Authority approved a request by GGT to extend the date for submission of proposed revisions to the GGP access arrangement from 16 June 2014 to 15 August 2014. On 30 May 2014, the Authority approved an election by GGT not to treat the capacity from the expansion of the GGP as part of the covered pipeline. The Authority granted the extension to allow GGT to complete work it had deferred pending the Authority's decision.

7. GGT's proposed revised access arrangement covers the period 1 January 2015 to 31 December 2019. GGT's current access arrangement (the second access arrangement) applies until a revised access arrangement is approved by the Authority.

8. The purpose of an access arrangement is to provide details about the terms and conditions, including price, upon which an independent third party user can gain access to the pipeline to transport gas.

9. The GGP transports gas from gas fields in the Carnarvon basin and the North West Shelf to mining customers in the Pilbara, Murchison and Goldfields regions of Western Australia for industrial use and power generation. The GGP consists of a mainline (1,378 km in length) running from Yarraloola to Kalgoorlie and a lateral pipeline 47 km in length extending from the mainline to Newman.[3]

10. The GGP is a pipeline with covered (regulated) components and uncovered (unregulated) components which consists of expansions that have not been covered by the access arrangement. Expansions of the pipeline are additions of assets which lead to increased capacity of the pipeline, as opposed to extensions of the pipeline which extends the geographic range of the pipeline. The uncovered components of the pipeline include:[4]

    - solar Centaur C40 compressor package and associated infrastructure and solar Centaur C50 compressor package and associated infrastructure at existing compressor station site at Paraburdoo;
    - solar Centaur C50 gas compressor package and associated infrastructure at existing scraper station site at Wyloo West;
    - solar Centaur C50 gas compressor package and associated infrastructure at existing scraper station site at Ned's Creek;

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1 Goldfields Gas Transmission Pty Ltd, *Goldfields Gas Pipeline: Proposed Revisions to Access Arrangement*, 30 March 2012, p 3.

2 Notice, Final Guidelines, Rate of Return Guidelines for Gas Transmission and Distribution Networks

3 APA Group, http://www.apa.com.au/our-business/energy-infrastructure/western-australia.aspx, 23 October 2014.

4 Goldfields Gas Transmission Pty Ltd, *Proposed Revised Access Arrangement Information, 28 August 2014*, Table 1, p.2.

- solar Centaur C50 gas compressor package and associated infrastructure at existing compressor station site at Yarraloola;
- two Solar Centaur C50 gas compressor packages and associated infrastructure at existing scraper station site at Turee Creek; and
- custody transfer meter stations at Boonamichi Well (about 110 km west of Newman) and Yarnima (on the Newman lateral).

11. The construction of the GGP was completed in 1996 by the Goldfields Gas Transmission Joint Venture (**GGTJV**). The original joint venture participants were a consortium of mining companies: Westminco Oil Pty Ltd; Normandy Pipelines Pty Ltd; and BHP Minerals Pty Ltd. The current joint venture participants, and their shares in the GGTJV are: Southern Cross Pipelines Australia Pty Ltd (62.664 per cent); Southern Cross Pipelines (NPL) Australia Pty Ltd (25.493 per cent); and Alinta DEWAP Pty Ltd (11.843 per cent). Southern Cross Pipelines Australia Pty Ltd and Southern Cross Pipelines (NPL) Australia Pty Ltd are APA Group entities. Alinta DEWAP Pty Ltd is an entity within the Alinta Energy group.

12. The GGTJV participants assigned the task of operating the GGP to GGT, a wholly owned subsidiary of APA Group. The GGTJV has also given its written permission for GGT to act on its behalf in respect of service provider requirements under the NGL and NGR.[5]

13. The Authority has prepared this Issues Paper to:

- guide interested parties in preparing submissions to the Authority on GGT's proposed revised access arrangement; and
- assist interested parties in understanding some of the key issues that will be addressed by the Authority in determining whether to approve or not approve the proposed revised access arrangement.

14. The Issues Paper is not an exhaustive review of the content of the proposed revised access arrangement or the matters that the Authority will address in making its determination. Interested parties are invited to make submissions on any elements of the proposed revised access arrangement.

15. The Authority invited submissions from interested parties on the revised access arrangement by publishing a notice on 5 September 2014. The Authority extended this consultation period in its notice on 16 October 2014, and further extended the consultation with the release of this Issues Paper to allow 10 business days for submissions from interested parties. Interested parties are invited to make submissions on GGT's proposed revised access arrangement proposal for the GGP by **4:00 pm (WST) Monday, 17 November 2014**.

16. Submissions should be marked to the attention of the Assistant Director, Gas Access.

- Email address: publicsubmissions@erawa.com.au
- Postal address: PO Box 8469, PERTH BC WA 6849.
- Office address: Level 4, Albert Facey House, 469 Wellington Street, Perth WA 6000.

[5] GGT is also considered a service provider as it controls and operates the GGP. In accordance with section 10(2) of the NGL, GGT is considered as the "complying service provider".

Regulatory Framework

17. This is GGT's first access arrangement submitted in accordance with the requirements of the NGL and NGR. The Authority considered GGT's previous access arrangements under the Code. In January 2010, the *National Gas Access (WA) Act 2009* came into effect, replacing the scheme of access regulation of the Code with the scheme of the NGL and the NGR.

18. The requirements for an access arrangement are established by the NGL and NGR as enacted by the *National Gas (South Australia) Act 2008* and as implemented in Western Australia by the *National Gas Access (WA) Act 2009* and the *National Gas Access (Western Australia) Law* (**NGL(WA)**).

19. Under rule 100 of the NGR, all provisions of an access arrangement are required to be consistent with the National Gas Objective (**NGO**). The NGO is defined in Section 23 of the NGL(WA):

> The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

20. Sections 28(1) and (2) of the NGL(WA) specify the manner in which the Authority must perform or exercise its economic regulatory functions or powers.

> 28. Manner in which [Authority] must perform or exercise its economic regulatory functions or powers
>
> (1) The [Authority] must, in performing or exercising an [Authority] economic regulatory function or power, perform or exercise that function or power in a manner that will or is likely to contribute to the achievement of the national gas objective.
>
> (2) In addition, the [Authority] –
>
> (a) must take into account the revenue and pricing principles –
>
> (i) when exercising a discretion in approving or making those parts of an access arrangement relating to a reference tariff; or
>
> (ii) when making an access determination relating to a rate or charge for a pipeline service; and
>
> (b) may take into account the revenue and pricing principles when performing or exercising any other [Authority] economic regulatory function or power, if the [Authority] considers it appropriate to do so.

21. Appendix 2 of this Issues Paper details the access arrangement review process. The review process is set out in The Gas Access Arrangement Guideline on the Authority's website.

22. GGT is required to submit a "full access arrangement" for the GGP. The required content of a full access arrangement proposal is specified in rule 48 of the NGR. Appendix 3 of this Issues Paper further elaborates the required content of an access arrangement.

23. Following the submission of GGT's access arrangement proposal, the AEMC made a rule change with regards to rule 77(2)(a) of the NGR relating to setting the opening capital base. The rule change requires the removal of any benefit or penalty associated with any difference between actual and estimated expenditure included

in the opening capital base. The AEMC's rule change was effective from 2 October 2014.

Specific Issues for Consideration

24. The Authority has identified a number of specific issues that it is particularly interested in receiving comment on. However, parties are also invited to make submissions on any matters in the GGT proposal. The specific issues identified include:

- Total revenue and cost allocation
- Rate of return on the regulatory asset base
- Depreciation of the capital base
- Estimated cost of corporate income tax

Total Revenue and Cost Allocation

25. Rule 93 of the NGR requires the allocation of total revenue between reference services and other services in a ratio in which costs are allocated between reference and other services.

26. As in the current GGP access arrangement, GGT proposes to exclude the costs associated with the uncovered pipeline from the total revenue that is used to derive reference tariffs. This has been approved by the Authority and the Electricity Review Board (**ERB**) for the current access arrangement that was reviewed under the Code.[6,7]

27. GGT proposes to include all costs that would be incurred by a prudent service provider in operating the covered pipeline on a standalone basis in total revenue that is used to derive reference tariffs. GGT proposes to exclude only incremental costs associated with the uncovered pipeline.

28. The key implication of this cost allocation methodology is that, when new customers are added to the pipeline by way of uncovered expansions, the customers of the covered pipeline are not allocated a reduced portion of pipeline costs that are shared with those new customers.[8]

29. In section 3 of its access arrangement supporting information, GGT sets out the reasons why its proposed allocation of costs between the covered pipeline and the uncovered pipeline complies with the NGR, the NGO, and the revenue and pricing principles set out in the NGL.[9] In support, GGT cites the opinion of HoustonKemp Economists (**HoustonKemp**) and Competition Economists Group (**CEG**) to show

[6] Economic Regulation Authority, *Final Decision on GGT's Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 13 May 2010, paragraph 63.

[7] Western Australian Electricity Board of Review, *Applications Nos 1 and 2 of 2010, Reasons for Decision*, paragraph 200.

[8] Except for corporate costs which GGT has allocated on a different basis, see paragraph 112.

[9] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Supporting Information*, 15 August 2014, pp. 22-28.

that its approach will promote efficient use of, and efficient investment in, natural gas services consistently with the NGO.

30. HoustonKemp argues that GGT's proposed approach promotes efficiency consistently with the NGO. HoustonKemp considers that the total revenue that is used to derive reference tariffs is sufficient to cover the cost of providing the reference service, but not greater than the standalone cost of providing the covered pipeline capacity.

31. CEG argues that GGT's proposed approach allows the prices to be paid for by customers of uncovered expansions to reflect the marginal costs of these expansions. CEG considers that this is likely to promote the efficient use of, and investment in, natural gas services, consistent with the requirements of the NGO.

32. In summary, GGT has proposed to calculate the total revenue that is used to derive reference tariffs as follows:

- GGT has excluded the capital costs of uncovered expansions, and the operating and maintenance costs of the uncovered pipeline.
- GGT has calculated the total revenue for the covered pipeline as the total cost of providing the reference service, negotiated services and services to the joint venturers, using the covered pipeline.

Issue 1 Total Revenue and Cost Allocation

- Submissions are invited from interested parties on GGT's approach to allocate all costs on a standalone basis to the covered pipeline and whether this is consistent with the NGR and NGO.

Rate of Return on the Regulatory Asset Base

33. The rate of return, based on a weighted average cost of capital (**WACC**), provides for a return on the regulatory asset base.

34. Rule 87 of the NGR addresses rate of return requirements. Rule 87 specifies that the return on the projected capital base for each regulatory year of the access arrangement period is to be calculated by applying a rate of return that is commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk as the service provider. The allowed rate of return for a regulatory year is to be a weighted average of the return on equity for the access arrangement period and the return on debt for that regulatory year (giving the WACC), and is to be determined on a nominal vanilla basis that is consistent with the estimate of the value of imputation credits.

35. In line with the requirements of rule 87(13) of the NGR, the Authority published its Rate of Return Guidelines on 16 December 2013.[10]

[10] Economic Regulation Authority, *Rate of Return Guidelines: Meeting the requirements of the National Gas Rules*, 16 December 2013. The term 'Guidelines' also refers to the companion explanatory statement for the

36. GGT proposes, for the purposes of its access arrangement revision proposal, an approach to the rate of return which yields a WACC of 9.64 per cent, comprising:

- a return on debt of 7.89 per cent;
- a return on equity of 12.28 per cent; and
- gearing of 60 per cent debt.

37. In developing its proposed rate of return, GGT has departed from the approach set out in the Guidelines, in its estimates of:

- the risk free rate;
- the return on debt; and
- the return on equity.

38. GGT's estimates of the risk free rate were calculated as the 40 day average – ending 30 June in each relevant year – of the yield on 10 year Commonwealth Government Securities (**CGS**).[11] The 10 year term of the risk free rate contrasts with the approach set out in the Authority's Rate of Return Guidelines, which requires a 5 year term for the risk free rate for both the return on debt and the return on equity.[12]

39. The return on debt proposed by GGT is derived as the sum of trailing average estimates at the start of the regulatory period for:

- the risk free rate;
- the Debt Risk Premium (**DRP**);
- debt raising costs; and
- hedging costs.

40. For the risk free rate in the cost of debt, GGT proposes to use a 10 year trailing average estimate, based on 10 year CGS for which 40 days of observations are taken prior to 30 June each year.

41. It also proposes to use a 10 year trailing average estimate of the DRP at the start of the regulatory period, based on the Reserve Bank of Australia's (**RBA**) estimates of the corporate credit spread to Commonwealth Government Bond data for 10 year debt of the BBB band credit rating.

42. GGT has applied debt raising and hedging costs of 0.125 per cent and 0.025 per cent respectively, consistent with the approach set out in the Rate of Return Guidelines.[13]

Guidelines (Economic Regulation Authority, *Explanatory Statement for the Rate of Return Guidelines: Meeting the requirements of the National Gas Rules*, 16 December 2013 and Economic Regulation Authority, *Appendices to the Explanatory Statement for the Rate of Return Guidelines: Meeting the requirements of the National Gas Rules*, 16 December 2013)

[11] Goldfields Gas Transmission Pty Ltd, *Goldfields Gas Pipeline: Access Arrangement Revision Proposal – Supporting Information*, 15 August 2014, p. 84.

[12] Economic Regulation Authority, *Rate of Return Guidelines: Meeting the requirements of the National Gas Rules*, 16 December 2013, p. 18.

[13] Economic Regulation Authority, *Rate of Return Guidelines: Meeting the requirements of the National Gas Rules*, 16 December 2013, p. 28.

43. The return on equity that is proposed by GGT is estimated using the Sharpe Lintner Capital Asset Pricing Model (**SL CAPM**). GGT's estimate is based on the following information:

- SL CAPM – return on equity of 12.28 per cent:
  - the risk free rate for the SL CAPM is based on the 10 year CGS (3.73 per cent);
  - an equity beta for the SL CAPM of 1.10 is proposed, implied by the return on equity of 11.24 per cent estimated by GGT's consultant (Strategic Finance Group);
  - a Market Risk Premium (**MRP**) of 7.77 per cent – derived as the difference between GGT's estimated return on equity for the market of 11.5 per cent and the 10 year estimate of the risk free rate of return of 3.73 per cent, by using the SL CAPM;[14]

44. Based on this information GGT propose an estimate of 12.28 per cent for the return on equity for the covered pipeline.[15]

45. GGT then uses estimates derived from the Fama French Model (**FFM**) and Dividend Growth Model (**DGM**) as a cross check, concluding that its estimate of 12.28 per cent is reasonable as it contends that the covered services have higher risk than a typical energy network business in Australia:

- DGM – return on equity of around 11.0 per cent for a listed energy network business in Australia:[16;]
  - excluding adjustment for bias in dividend forecasts;
- FFM – return on equity of 10.9 per cent for a benchmark energy networks business in Australia.[17]

46. The equity beta estimate of 1.10 proposed by GGT for use in the SL CAPM model is based on the advice of SFG Consulting. This estimate is developed from a first principles estimate of the forward looking return on equity, using finance principles.

47. GGT proposes a value for imputation credits (**gamma**) of 0.25, based on a payout ratio of 0.7 as indicated in the Rate of Return Guidelines and a market value of the utilisation rate (theta) of 0.35 based on an estimate made by SFG Consulting in 2011.[18]

Application of the Guidelines

The benchmark efficient entity and a similar risk

48. GGT makes reference to the benchmark sample of businesses that estimates of gearing and equity beta are based on; noting that the businesses in the sample are

[14] Goldfields Gas Transmission Pty Ltd, *Goldfields Gas Pipeline: Access Arrangement Revision Proposal – Supporting Information*, 15 August 2014, p. 118.

[15] Ibid, p. 120.

[16] Goldfields Gas Transmission Pty Ltd, *Goldfields Gas Pipeline: Access Arrangement Revision Proposal – Supporting Information*, 15 August 2014, p. 119.

[17] Ibid, p. 119.

[18] Ibid, p. 159.

network service providers in either the Australian electricity or gas industries.[19] However, GGT is of the view that the Rate of Return Guidelines offer little assistance in assessing the similarity or otherwise of risk between such businesses and that of the covered services.[20]

49. In particular, GGT questions the meaning of the word 'similar' in NGR 87(3). GGT argues that the meaning of the term similar 'must be settled to facilitate the identification of a 'homogeneous' population', to enable assessment of comparative risk.[21]

The term applied for the risk free rate

50. GGT submits that the use of a five year term for the risk free rate is not consistent with investors in a regulated firm having a reasonable opportunity to recover a return on their investment which is commensurate with prevailing market conditions in the market for financial assets.[22]

51. It is of the view that the present value principle detailed in the Rate of Return Guidelines does not provide any reason for equating the term of risk free rate with the length of the regulatory period and that there is no reason to expect that a return on equity or debt based on that rate would contribute to the achievement of the allowed rate of return objective.[23] In this context, GGT asserts that the arguments of Lally and Davis – set out in the Rate of Return Guidelines are in error.[24]

52. GGT's main argument for using a longer term for the risk free asset is that investors regard long term bonds as the appropriate proxy for the risk free asset, and that this 'theoretical' view is supported by evidence from financial markets.[25]

53. GGT also cites for support the Australian Energy Regulator's (**AER**) view that equity in an ongoing infrastructure business can be expected to generate cash flows in the long term and potentially to perpetuity. The term of the proxy therefore should match the long life of those cash flows and those of the underlying assets.[26]

Return on equity

54. GGT notes that use of the Sharpe Lintner CAPM requires estimation of three parameters:

- the risk free rate;
- the beta of the asset for which the rate of return is to be determined; and
- the MRP.

55. GGT's views with regard to the term of the risk free rate are set out above.

[19] Ibid, p. 69.
[20] Ibid, p. 89.
[21] Ibid, p. 89.
[22] Ibid, p. 82.
[23] Ibid, p. 83.
[24] Ibid, pp. 75–79.
[25] Ibid, p. 82.
[26] Ibid, pp. 83-84.

56. With respect to equity beta, GGT submits that none of the benchmark sample entities used by the Authority to estimate the benchmark efficient entity beta in the Rate of Return Guidelines are similar to the covered pipeline, particularly in terms of the characteristics of the users that it serves.[27]

57. GGT argues that its gas transportation business based on the covered pipeline is not unlike The Pilbara Infrastructure, which has a higher risk as compared to general freight services. It cites as the following reasons that:

- it has low prospects for diversification given its remote location and the associated economic base; and
- it has a high dependence on the export mining sector, that exposes it to the relatively high volatility of minerals markets indicating a potentially higher level of risk.[28]

58. As a result, GGT submits that an estimate of the equity beta may be expected to be outside the range of 0.5 to 0.7 consistent with the approach set out in the Rate of Return Guidelines.[29]

59. GGT considers that it would be difficult to find comparators for the covered pipeline, even if one looked overseas. For example, GGT notes that potential United States comparators tend to supply gas into large industrial and urban areas, and in any event tend to be subsidiaries of larger conglomerates. GGT therefore submits that the use of comparators for the estimation of beta does not contribute to the achievement of the allowed rate of return objective.[30]

60. GGT has instead relied on an estimate of beta developed by its consultant SFG Consulting, which is 1.10, in the range of 1.07 to 1.17.[31] These estimates are based on an approach which assumes a certain level of market volatility in market returns over five years.[32] SFG then uses information relating to the risk free rate, gearing, the cost of debt, the benchmark credit rating, the average return on the market, and measures of market volatility, to estimate a return on equity for the benchmark entity in the absence of default.[33] Once the return on equity is known, the SL CAPM model is used to derive the estimate of beta.

61. GGT submits that the MRP in the application of the Sharpe-Lintner CAPM should not be considered independently of the rest of the model and that doing so is

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[27] Ibid p. 95.

[28] Ibid, p. 98.

[29] Ibid, p. 99.

[30] Ibid, p. 120.

[31] Goldfields Gas Transmission Pty Ltd, *Goldfields Gas Pipeline: Access Arrangement Revision Proposal – Supporting Information*, 15 August 2014, p. 106.

[32] SFG Consulting initially construct two states of the world for the return on the market – good and bad – which are plus or minus one standard deviation around SFG's estimate of the average return on the market of 10.54 per cent per year (the market estimate is based on a weighted average of four different approaches to estimating the market return) (Goldfields Gas Transmission Pty Ltd, *Goldfields Gas Pipeline: Access Arrangement Revision Proposal – Supporting Information*, 15 August 2014, Attachment 7, p. 6 and p. 9).

[33] GGT claims it is correct to assume away the effect on rates of return of business default. In this context, GGT consider that the building block model for total revenue and tariff determination should be based on promised returns, not expected returns, with the former excluding default, but the latter including it (Goldfields Gas Transmission Pty Ltd, *Goldfields Gas Pipeline: Access Arrangement Revision Proposal – Supporting Information*, 15 August 2014, Attachment 7, pp.40-41).

erroneous. It is of the view that estimates of the forward looking expected return on the market portfolio should provide the starting point for the estimate of the MRP, which may then be derived as the difference between the estimated forward looking market return and the risk free rate at the time the model is applied.[34] The Authority notes that this view has the hallmarks of the Wright approach, discussed in the Rate of Return Guidelines, as it infers that the MRP will offset fluctuations in the risk free rate.[35]

62. GGT estimates the expected return on equity informed by estimates that are based on historical data and the DGM. These estimates are used to determine a range and a mid-point estimate for the return on equity. GGT then applies the SL CAPM and the 10 year risk free rate to arrive at its MRP estimate of 7.77 per cent.[36]

63. Applying the SL CAPM, GGT then determines a return on equity for the covered service of 12.28 per cent. GGT submits that estimates of the return on equity for other listed network businesses, derived using the DGM, as well as estimates of the return on the market from application of the Fama-French model, provide support for its estimated return on equity of 12.28 per cent, once account is made of the risk associated with the GGP.[37]

Return on Debt

64. GGT is of the view that using the 'on-the-day approach' set out in the Rate of Return Guidelines to estimate the return on debt:

- leads to a cost of debt lower than the cost of debt an efficient service provider would currently incur given debt issuing practices over the past 10 years; and
- may be superior in terms of productive efficiency, but is not superior in terms of allocative efficiency, as the latter is a matter of 'costs from which the prices to be charged… have been determined, and the structures of those prices (they are likely to be multi-part prices, and not simple prices equated to marginal costs').[38]

65. In relation to the first dot point above, GGT notes that if the reference tariffs are insufficient to provide the service provider with the opportunity to recover efficiently incurred costs of providing reference services, they will impair the continued and efficient provision of pipeline services. GGT submits that the cost of debt derived using the method set out in the Rate of Return Guidelines is not in the long term interest of consumers and will not contribute to the achievement of the NGO.

66. In relation to the second point, GGT suggests that any reasoning that the on-the-day-approach results in superior allocative efficiency compared to the trailing average is overturned by the annual updating of the risk free rate (which takes place through the tariff variation mechanism outlined in paragraph 158 below). Specifically, GGT contends that by ignoring the risk free rate component of the cost

[34] Goldfields Gas Transmission Pty Ltd, *Goldfields Gas Pipeline: Access Arrangement Revision Proposal – Supporting Information*, 15 August 2014, p. 110.

[35] Economic Regulation Authority, *Appendices to the Explanatory Statement for the Rate of Return Guidelines*, 16 December 2013, Appendix 14, paragraph 14.

[36] Goldfields Gas Transmission Pty Ltd, *Goldfields Gas Pipeline: Access Arrangement Revision Proposal – Supporting Information*, 15 August 2014, p. 118.

[37] Ibid, p. 119.

[38] Ibid, p. 132.

of debt in the annual update, any allocative efficiencies that might be achieved through an annual update of the entire cost of debt are lost.[39]

67. GGT is of the view that the annual updating approach favours tariff stability over allocative efficiency. It submits that the Rate of Return Guidelines do not provide much evidence on whether annual updating is in the long term interests of consumers as the Guidelines rely on the views of retailers which may or may not be the views of final consumers.[40]

68. With regard to the estimate of the debt risk premium, GGT submits that the use of the bond yield approach – in the way proposed by the Rate of Return Guidelines – will not lead to an estimate that meets the requirements of rule 87 of the NGR as:

- using the joint weighted remaining term to maturity for the term of the debt underestimates the term to maturity of the debt issued, and hence the required debt risk premium, assuming an upward sloping yield curve;
- the term to maturity estimated on a sample of bonds that have two years or longer remaining does not necessarily reflect the term to maturity of debt of the benchmark efficient entity; and
- debt issues in offshore markets are excluded, whereas the benchmark efficient entity would be expected to issue at least part of its debt in those markets.[41]

69. GGT therefore proposes that the debt risk premium be based on an average of credit spreads reported by the Reserve Bank of Australia – for non-financial corporations with a credit rating in the BBB band and a term to maturity of 10 years – for the three months from April to June in each year for contributing to the calculation of the 10 year trailing average.[42] This is combined with an on the day estimate of the 10 year risk free rate, based on the 40 day average to 30 June in each relevant year of the trailing average, plus a margin of 0.15 per cent to cover debt raising and hedging costs in each year.[43]

70. GGT proposes that the resulting 10 year trailing average estimate of the return on debt would be updated annually during the access arrangement period. At each update, the earliest annual estimate would be dropped from the trailing average, and an estimate for the current year added. No transitional arrangement is proposed.[44]

[39] Ibid, p. 132.

[40] Ibid, pp. 132-133.

[41] Ibid, pp. 125-127.

[42] The Authority notes that it has recently accepted that the appropriate term for the debt risk premium is 10 years (see Economic Regulation Authority, *Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution System*, 14 October 2014, pp. 188-189).

[43] Ibid, p. 135.

[44] Ibid.

Issue 2 Rate of Return on the Regulatory Asset Base

Submissions are invited from interested parties on the following:

- GGT's departure from the Rate of Return Guidelines.
- GGT's proposed approach to estimating the cost of debt for the benchmark efficient entity, and its consistency with the requirements of the NGL and the NGR, and the allowed rate of return objective in particular.
- GGT's proposed approach to estimating the return on equity, and its consistency with the requirements of the NGL and NGR, and the allowed rate of return objective in particular.

Depreciation of the Capital Base

71. Rules 88, 89 and 90 of the NGR specify particular requirements for the depreciation of pipeline assets in the Regulatory Asset Base (**RAB**).

72. Rule 88 states that the depreciation schedule may consist of a number of separate schedules, each relating to a particular asset or asset class.

73. Rule 89 states that the depreciation schedule should be designed so that:[45]

- reference tariffs will vary in a way that promotes efficient growth in the market for reference services;
- each asset or asset class is depreciated over its economic life;
- the expected economic life of a particular asset or asset class can be adjusted, as far as reasonably practical;
- the amount by which the asset is depreciated over its economic life does not exceed the value of the asset at the time of its inclusion in the capital base; and
- the service provider's reasonable needs for cash flow to meet financing, non-capital and other costs are allowed for.

74. The Authority's discretion under rule 89 of the NGR is limited, which means that the Authority cannot withhold its approval if it is satisfied that it complies with applicable requirements of the NGL and NGR and is consistent with applicable criteria (if any) prescribed by the NGL and NGR.

75. Rule 90 of the NGR specifies that a full access arrangement must contain provisions governing the calculation of depreciation for establishing the opening capital base for the next access arrangement period. The provisions must resolve whether depreciation of the capital base is to be based on forecast or actual capital expenditure.[46]

[45] Rule 89 of the NGR.

[46] Rule 90 of the NGR.

Method of accounting for the RAB and treatment of depreciation

76. GGT is proposing Historic Cost Accounting (**HCA**) of the RAB, with nominal straight line depreciation. HCA is based on the values of the assets at the time of expenditure; the historic cost values are not indexed year to year for inflation. Annual depreciation is calculated by dividing the historic value by the effective life of the asset. The resulting value in nominal terms for each year is then included as the depreciation building block in the cost of service.

77. This approach is consistent with the approach that has been used for the GGT access arrangements to date. It results in a nominal RAB. Past decisions have then applied a nominal rate of return. This results in a nominal value for the return on and of capital in the revenue building block model.

78. The HCA approach contrasts with the Current Cost Accounting (**CCA**) depreciation approach, which has typically been applied in other access arrangements in Australia.[47] The CCA approach maintains the historic value of the asset base in real terms (giving the so-called 'current cost'), for example by indexing the closing value of the previous year's asset base each year to account for inflation. Annual depreciation is then calculated on the current cost, given the effective life of the asset.

79. The resulting indexed straight line depreciation component for the building block revenue model differs slightly, depending on whether it is used in a real or nominal revenue model. Assuming an indexed straight line depreciation method is adopted, then:

- In a real revenue model – the real straight line depreciation is used directly as the depreciation building block in the cost of service.
- In a nominal revenue model – such as the Post Tax Revenue Model (**PTRM**) used by the AER – the annual inflation gain in the regulated asset base, calculated by multiplying the previous year's closing asset value by the rate of inflation, is deducted from the nominal depreciation for the current year.[48] This removes a double count of inflation, which would otherwise occur in the PTRM.[49]

[47] The Authority notes that it recently rejected use of HCA depreciation for the Mid-West and South-West Gas Distribution System (**GDS**), on the grounds that it considered that the approach was not consistent, in the context of the GDS, with the requirements of rule 89(1)(a) of the NGR, or with the National Gas Objective (see Economic Regulation Authority, *Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution System*, 14 October 2014, pp. 233-234).

[48] In the PTRM, the nominal depreciation for the current year is calculated as the value of the depreciation on the indexed (opening) capital base.

[49] This is because the nominal WACC also includes a return for inflation. In the PTRM, the WACC is also applied to the nominal opening value of the capital base in the current year. Therefore, a return for inflation is included in both the WACC and in the unadjusted depreciation. Deducting the value of inflation applied through indexation under the CCA depreciation approach therefore avoids a double count.

Growth in the market for reference services

80. GGT states:[50]

> "Whether a depreciation schedule used in setting a reference tariff promotes, or does not promote, growth in the market for reference services will depend on, among other things, the price of gas.
>
> In Western Australia, the price of gas is expected to rise over the next decade, and is expected to rise in the longer term as more marginal reserves are developed.
>
> …Growth in the market for reference services should, in these circumstances, be promoted by a declining pipeline transportation tariff determined using straight line depreciation. It is unlikely to be promoted by a rising transportation tariff using a depreciation schedule (such as that of the AER PTRM method) which defers the return of investment."

81. GGT states that the use of HCA straight line depreciation can be expected to promote growth in the market for the reference service, but notes that rule 89(1)(a) of the NGR requires more than growth in the market, it requires efficient growth.[51]

82. On this point, GGT considers that structuring of the GGP reference tariff into two parts – a variable component based on the marginal cost of supplying the service, and a fixed component such that the user then pays the total cost of supplying the service – is efficient. GGT consider that including depreciation in the fixed component then allows the reference tariff to vary, over time, in a way that promotes efficient growth in the market for reference services.[52] Further, GGT states that use of HCA straight line depreciation – in circumstances where the cost of gas is expected to rise – will assist in promoting growth in the market for reference services.[53] GGT therefore concludes that the use of straight line depreciation, together with a two part tariff structure, allows the reference tariff to vary, over time, in a way that promotes efficient growth in the market for reference services in accordance with the requirement of rule 89(1)(a) of the NGR.

83. In support of this view, GGT provided a report by HoustonKemp. HoustonKemp notes that the market for reference services provided by the GGP may be characterised as mature, with limited scope for future growth, such that the time profile of future costs is unlikely to have much impact on growth prospects. HoustonKemp's view is that the most appropriate depreciation method in this context is that which results in a time profile of depreciation that recovers relatively more depreciation during periods when customers have a relatively high willingness to pay.

84. HoustonKemp uses long term trends in the world price of resources produced by the mines served by GGP, to contend that GGP's customers presently have a relatively high willingness, or ability, to pay for gas transportation services.[54] On that basis,

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[50] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Revision Proposal; Supporting Information*, 15 August 2014, p. 48.

[51] Ibid.

[52] Ibid, p. 50.

[53] Ibid.

[54] HoustonKemp provides figures showing prices of gold above USD(2010)1,200 per ounce, nickel around USD(2010)2,000 per million tonnes, iron ore around USD(2010)120 per dry metric tonne unit, and USD(2010)15,000 per million tonne (see Goldfields Gas Transmission Pty Ltd, *Access Arrangement Revision Proposal; Supporting Information*, 15 August 2014, Attachment 4, p. 13).

HoustonKemp considers that the use of HCA, which recovers relatively more depreciation in the earlier years of an asset's life compared to CCA, is consistent with the NGR. HoustonKemp states:[55]

> Such an approach would amount to the prudent management of the future risk that resource prices will not remain at their current historical highs, in which event the ability or willingness of users to pay for pipeline services will be reduced. In extreme, such an approach would reduce the risk of the GGP pipeline asset being stranded, through unanticipated shrinkage in the demand for reference services.
>
> The adoption of a depreciation method that reduced or minimised such risk would also:
>
> - reduce the risk associated with investing in the GGP;
> - reduce the degree of mining-related risk exposure, thereby reducing the return (i.e. the weighted average cost of capital or WACC) that would otherwise be required by investors in the GGP; and, ultimately
> - reducing the long run average reference tariffs for end-users.

Issue 3 Depreciation of the Capital Base

Submissions are invited from interested parties on the following:

- Whether straight line depreciation on the historic cost of the asset (the Historic Cost accounting approach) meets the requirements of rule 89 of the NGR.
- Whether alternative approaches, such as indexed straight line depreciation (the Current Cost Accounting approach) meets the requirements of rule 89 of the NGR.

Estimated Cost of Corporate Income Tax

85. Rule 87A of the NGR elaborates that the estimated cost of corporate income tax of a service provider for each regulatory year of an access arrangement period (**ETCt**) is to be estimated in accordance with the following formula:

$$ETC_t = (ETI_t \times r_t)(1-\gamma)$$

Where:

- ETI_t is an estimate of the taxable income for that regulatory year that would be earned by a benchmark efficient entity as a result of the provision of reference services if such an entity, rather than the service provider, operated the business of the service provider;
- r_t is the expected statutory income tax rate for that regulatory year as determined by the AER; and
- γ is the value of imputation credits.

86. Rule 76 of the NGR provides for the estimated cost of corporate income tax as a building block for total revenue.

87. GGT has estimated the cost of tax in each regulatory year by multiplying an estimate of annual taxable income by the expected income tax rate. GGT has estimated

[55] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Revision Proposal; Supporting Information*, 15 August 2014, Attachment 4, p. 13.

annual taxable income by removing cost of debt financing, operating expenses and tax depreciation from total revenue from the covered pipeline for each year over the third access arrangement period.[56]

88. GGT has estimated the Tax Asset Base (**TAB**) based the historical costs of GGP assets that may be depreciated for tax purposes. GGT has calculated tax depreciation using a straight line method. GGT states that it has used the asset lives determined by the Australian Taxation Office (**ATO**).

89. The corporate tax system allows for dividend imputation, whereby the tax paid by a company may be attributed (or imputed) to the shareholders by way of a tax credit to reduce the income tax payable on a distribution. This reduces or eliminates the tax disadvantages of distributing dividends to shareholders, by only requiring them to pay the difference between the corporate rate and their marginal rate.

90. Rule 87A of the NGR requires that an estimated cost of corporate income tax be reduced by an amount that represents the effect of dividend imputation, which is the value of gamma in the equation above. The factors that must be taken into account in estimating the value of gamma are set out in the Rate of Return Guidelines. Specifically, the parameter gamma (γ), is to be estimated as the product of two components, the payout ratio (F), and the utiilsation rate of distributed credits (θ):

$$\gamma = F \times \theta$$

91. The Explanatory Statement for the Authority's Rate of Return Guidelines concluded that the existing evidence supports the use of a range for the payout ratio of between 70 per cent and 100 per cent. The Authority considered that the appropriate estimate of the payout ratio is 0.70.[57]

92. GGT agrees with the Rate of Return Guidelines' proposed payout ratio of 0.7.[58]

93. However, GGT does not agree with the Authority's range for θ of 0.35 to 0.55. GGT instead proposes using an estimate of 0.35 for θ. This is the estimate made by SFG Consulting in 2011 and accepted by the Australian Competition Tribunal in Energex Limited.[59] The SFG consulting study used the dividend drop-off method, and is one of two current studies which, as noted in the Explanatory Statement, is relevant to the estimation of θ.

94. In particular, GGT rejects the upper bound estimate of the Authority's range for θ – of 0.55 – on the grounds that the upper bound does not account, when calculating the observed share price change ex-dividend, for the change in the overall market, or the 'market return correction'. GGT concludes that once the market return correction is accounted for (correctly), the dividend drop off studies used to estimate θ support the value of 0.35.[60]

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[56] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Revision Proposal; Supporting Information*, 15 August 2014, p. 152.

[57] Economic Regulation Authority of Western Australia, *Explanatory Statement of the Rate of Return Guidelines*, 16 December 2013, p. 212, para 928.

[58] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Revision Proposal; Supporting Information*, 15 August 2014, p. 154.

[59] Australian Competition Tribunal, *Application by Energex Limited (Gamma) (No5) [2011] ACT 9*, 12 May 2011.

[60] The Authority notes that it has reviewed its approach to estimating gamma since the release of the Rate of Return Guidelines. The Authority concluded in its recent GDS draft decision that a θ of 0.7 provides a most

95. GGT therefore estimates gamma to be 0.25 (=0.70 × 0.35).

96. Table 1 shows GGT's estimated cost of corporate income tax for the third access arrangement period.

Table 1 GGT's Estimated Cost of Corporate Income Tax

Nominal $ million	2015	2016	2017	2018	2019
GGT's Estimated Cost of Corporate Income Tax	0.59	3.68	9.99	10.13	10.03

Source: Goldfields Gas Transmission Pty Ltd, Proposed Revised Access Arrangement Information, 28 August 2014, Table 16, p. 28.

Issue 4 Estimated Cost of Corporate Income Tax

Submissions are invited from interested parties on the:

- use of the straight line method in calculating tax depreciation;
- reasonableness of the asset lives assumed in the Tax Asset Base; and
- appropriateness of the estimate of the parameter gamma (γ)

Overview of GGT's Proposal

Total Revenue

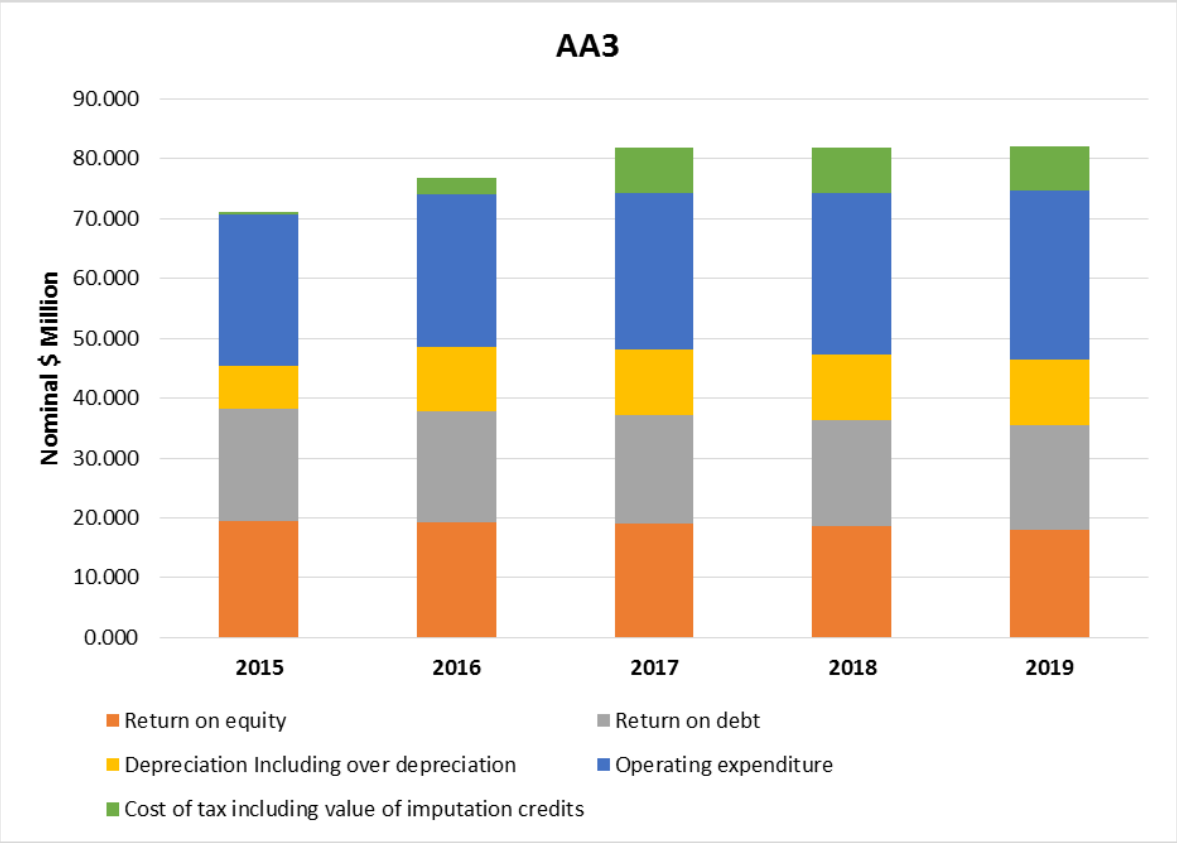
97. Under rule 76 of the NGR, total revenue is determined using the building block approach in which the building blocks are:
    - return on the projected capital base;
    - depreciation on the projected capital base;
    - estimated cost of corporate income tax;
    - increments or decrements resulting from the operation of an incentive mechanism to encourage gains in efficiency; and
    - forecast operating expenditure.

98. GGT has applied the building block methodology, including an estimate of the tax liability, to propose a total revenue requirement for the third access arrangement period of $393.76 million.[61] GGT's proposed building blocks of the total revenue requirement for the third access arrangement period is shown in Figure 1 and Table 2.

likely estimate of the utilisation rate, given a range of evidence (see Economic Regulation Authority, *Draft Decision on Proposed Revisions to the Access Arrangement for the Mid-West and South-West Gas Distribution System*, 14 October 2014, p. 215).

[61] Nominal $ million.

Figure 1 GGT's Proposed Total Revenue Building Blocks (AA3)



Source: Goldfields Gas Transmission, Proposed revised Access Arrangement Information, 28 August 2014, Table 15, p. 28.

Table 2 GGT's Proposed Total Revenue Building Blocks (AA3)[62]

Nominal $ Million	2015	2016	2017	2018	2019	Total
Return on equity	19.47	19.30	18.98	18.52	18.01	94.28
Return on debt	18.77	18.60	18.30	17.85	17.37	90.89
Depreciation	10.35	10.72	10.91	10.99	11.00	53.97
Over-depreciation prior period	(3.21)	0.00	0.00	0.00	0.00	(3.21)
Operating expenditure	25.28	25.41	26.17	26.90	28.26	132.02
Cost of tax	0.59	3.68	9.99	10.13	10.03	34.42
Value of imputation credits	(0.15)	(0.92)	(2.50)	(2.53)	(2.51)	(8.61)
Total	**71.11**	**76.79**	**81.85**	**81.85**	**82.17**	**393.76**

Source: Goldfields Gas Transmission, Proposed revised Access Arrangement Information, 28 August 2014, Table 15, p. 28.

99. GGT proposed total revenue as the total of the costs of the covered pipeline to provide the reference service, negotiated services and services to the joint venturers. It is the total cost of providing services using the GGP excluding:

[62] Totals presented in this table may not add exactly due to rounding to two decimal places.

- the capital costs of those parts of the GGP which are uncovered; and
- the operating and maintenance costs of the GGP which are uncovered.

100. GGT has estimated the total revenue for the covered pipeline as the total of:

- the return on the projected capital base of the covered pipeline (return on equity and return on debt);
- depreciation of the assets comprising the covered pipeline;
- an adjustment for an amount of over-depreciation during the prior period;
- the cost of corporate income tax estimated using the forecast revenue from the provision of the reference service, negotiated services and services to the GGT Joint Venture participants using the covered pipeline; and
- the forecast costs of operating the covered pipeline.

101. GGT has interpreted rule 87(4) of the NGR to require that the allowed rate of return be determined on a nominal vanilla basis, consistent with the inclusion of the cost of tax in the total revenue determined in accordance with rule 76 of the NGR.

Issue 5 Total Revenue

Submissions are invited from interested parties on the following:

- The appropriateness of GGT estimating the cost of corporate income tax from the forecast revenue from the reference services, negotiated services and services to the GGT Joint Venture participants using the covered pipeline.

Operating Expenditure

102. Rule 91 of the NGR states that operating expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.

103. Rule 71 of the NGR is also relevant to the Authority's consideration of forecast operating expenditure, particularly in considering whether actual operating expenditure for the second access arrangement period provides a benchmark of an efficient level of operating expenditure for the third access arrangement period.

104. GGT has estimated total operating expenditure for the second access arrangement at $125.64 million.[63],[64] GGT has forecast a 6.7 per cent decrease in operating expenditure to a total $117.20 million[65] for the third access arrangement period.[66], [67]

[63] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Revision Proposal: Supporting Information*, 15 August 2014, Table 24, p. 164.

[64] Real $ million at 31 December 2013.

[65] Real $ million at 31 December 2013.

[66] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Revision Proposal: Supporting Information,* 15 August 2014, p. 170.

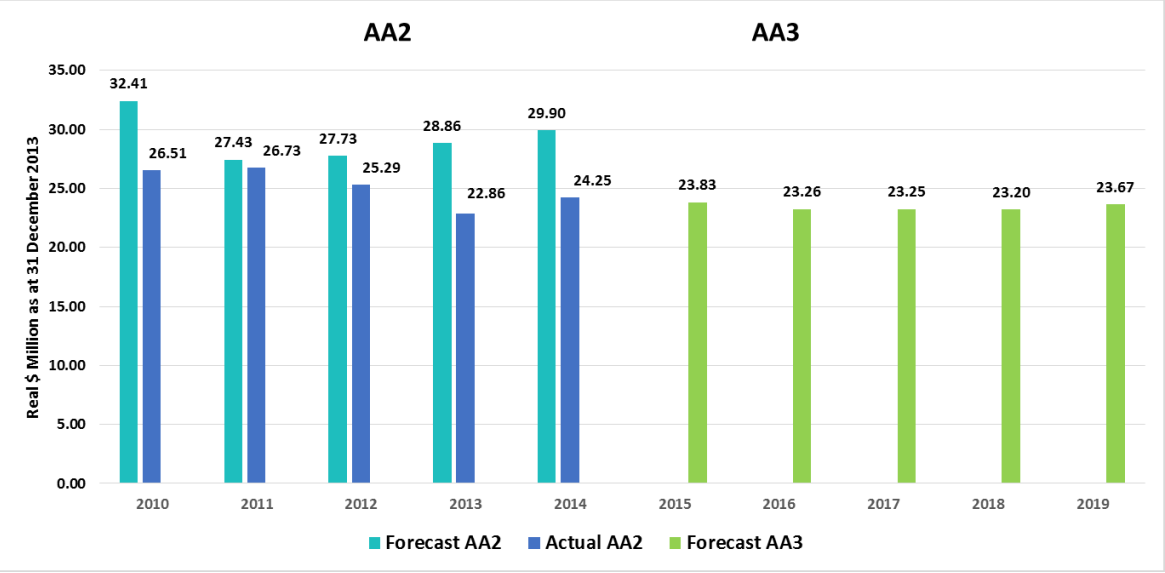
[67] For comparison purposes, the operating expenditure is compared over a five year basis.

105. GGT has used the approved five year operating expenditure budget for the GGP as the basis for its forecast of operating expenditure for the covered pipeline over the third access arrangement period as follows:

- remove forecast operating expenditure directly attributable to uncovered assets;
- allocate forecast operating expenditure attributable to the covered pipeline and uncovered assets using a ratio of TJ km/d of service provided using the covered pipeline to total TJ km/d of service provided using the covered pipeline and the uncovered assets;
- select base year (2012) of actual expenditure to compare the five-year budget forecasts to; and
- identify significant differences from the base year and, where appropriate, adjust the forecast accordingly.

106. Figure 2 shows the Authority's approved operating expenditure forecast for the second access arrangement period, the actual operating expenditure in the second access arrangement period[68] as well as GGT's proposed operating expenditure forecast for the third access arrangement period.

Figure 2 Authority Approved Forecast and Actual Operating Expenditure (AA2) and GGT's Proposed Operating Expenditure (AA3) by Year



Source: ERA's Reference Tariff Model 2012, Goldfields Gas Transmission Pty Ltd, Access Information Revision proposal: Supporting information, 15 August 2014 Table 24 p.164 and Table 26 p. 170.

107. In the proposed revised access arrangement information document provided by GGT, the forecast of operating expenditure is split into five categories: pipeline operations, commercial operations, regulatory costs, insurance and corporate overheads.

108. In the proposed revised access arrangement supporting information document provided by GGT, the forecast of operating expenditure is split into four main categories:

[68] The actual operating expenditure amount for 2014 is a forecast actual amount provided by GGT.

- APA operations, which covers expenditures incurred by APT Pipelines (WA) Pty Ltd in providing services to the covered pipeline. APA operations has four sub categories: administration (business services), engineering, field services and major expenditure jobs. APA operations operating expenditure constitutes 44 per cent of operating expenditure.
- GGT operations, which covers expenditures incurred by GGT in managing the covered pipeline. GGT operations has nine sub categories: administration, APA operations recoverable, APA operations management, APA commercial management, marketing, Newman, projects/operations, public relations and technical regulatory. GGT operations operating expenditure constitutes 15 per cent of operating expenditure.
- APA commercial operations, which covers expenditures incurred by APT Goldfields Pty Ltd in providing services for the commercial operation of the covered pipeline. APA commercial operations has eight sub categories: administration, legal, marketing, public relations, regulatory (ERA and regulatory), carbon liability, communications equipment lease and maintenance and insurance as well as a separate corporate costs category. APA commercial operations operating expenditure constitutes 15 per cent of operating expenditure.
- Corporate costs, which cover the costs of APA Group corporate functions that provide services to the covered pipeline. These functions include executive management, company secretarial, finance and accounting, risk management, human resources management, provision of information and communication technology services, legal and regulatory functions, and projects. Corporate cost operating expenditure constitutes 26 per cent of operating expenditure.

109. GGT has selected 2012 as the base year for assessing the efficiency and prudency of forecast of operating expenditure for 2015 to 2019. GGT's external auditor has reviewed operating expenditure attributed to the covered pipeline in 2012. Moreover, GGT considers 2012 to be representative of operating expenditure over 2010 to 2014. GGT considers that operating expenditure in 2013 and 2014 has been abnormally low due to the following:

- lower component expenditures in APA operations operating expenditure (engineering and field services) and GGT operations operating expenditure (administration); and
- smaller increases over 2012 in GGT operations operating expenditure (APA operations recoverable) and APA commercial operations operating expenditure (carbon liability).

110. Compared to the base year (in real terms), GGT's operating expenditure forecasts for the covered pipeline are as follows:

- Forecast average APA operations operating expenditure over the third access arrangement period is six per cent less than the base year's (excluding major expenditure jobs, which is non-recurrent). The decrease is driven by the reassignment of personnel from the covered pipeline to the uncovered pipeline and efficiency gain realisation.
- Forecast average GGT operations operating expenditure over the third access arrangement period is two per cent higher than the base year's. The increase seems to be driven by an increase in contractor fees for the Newman lateral and an increase in the projects/operations forecast to account for cyclones.

- Forecast average APA commercial operations operating expenditure over the third access arrangement period is 18 per cent higher than the base year's. The increase is mainly driven by a forecast increase in the ERA levy, and expenditure on the fourth access arrangement period proposal revision. In May 2013, Marsh insurance brokers estimated an annual insurance cost of $0.656 million for the GGP. GGT has chosen to retain its annual insurance forecast estimate of $0.697 million for the third access arrangement period.
- Forecast average corporate cost operating expenditure over the third access arrangement period is 27 per cent lower than the base year's. The decrease is driven by a reduced allocation of APA corporate costs to GGP, and a reduced allocation of GGP costs to the covered pipeline.

111. A single approach has been developed for, and is applied in, the allocation of corporate cost operating expenditure across all of the entities within the APA Group. Actual corporate costs are allocated across the entities within the APA Group according to the revenues earned by those entities. Prior to allocation any costs that are not used jointly by the entity are removed from the corporate costs. According to GGT, this approach is consistent with the approach that has been used to allocate corporate cost operating expenditure from APA Group to GGT for the second access arrangement period.

112. Corporate cost operating expenditure is then allocated from GGP to the covered pipeline based on the ratio of TJ km of capacity in the covered pipeline to the total TJ km of capacity in the GGP. This ratio has been calculated at 70 per cent.

113. To validate the corporate cost estimate, GGT engaged KPMG to provide benchmarks of the corporate costs of an efficient stand-alone business with a scale of operations similar to that based on the covered pipeline. KPMG estimated that the efficient range of corporate costs was between $4.539 million per annum and $8.178 million per annum (at December 2013 prices). GGT's forecast corporate costs of $6.025 million are within KPMG's estimated range.

114. Table 3 and Figure 3 show GGT's actual annual operating expenditure in the second access arrangement period, and GGT's proposed annual forecast operating expenditure for the third access arrangement period by category.

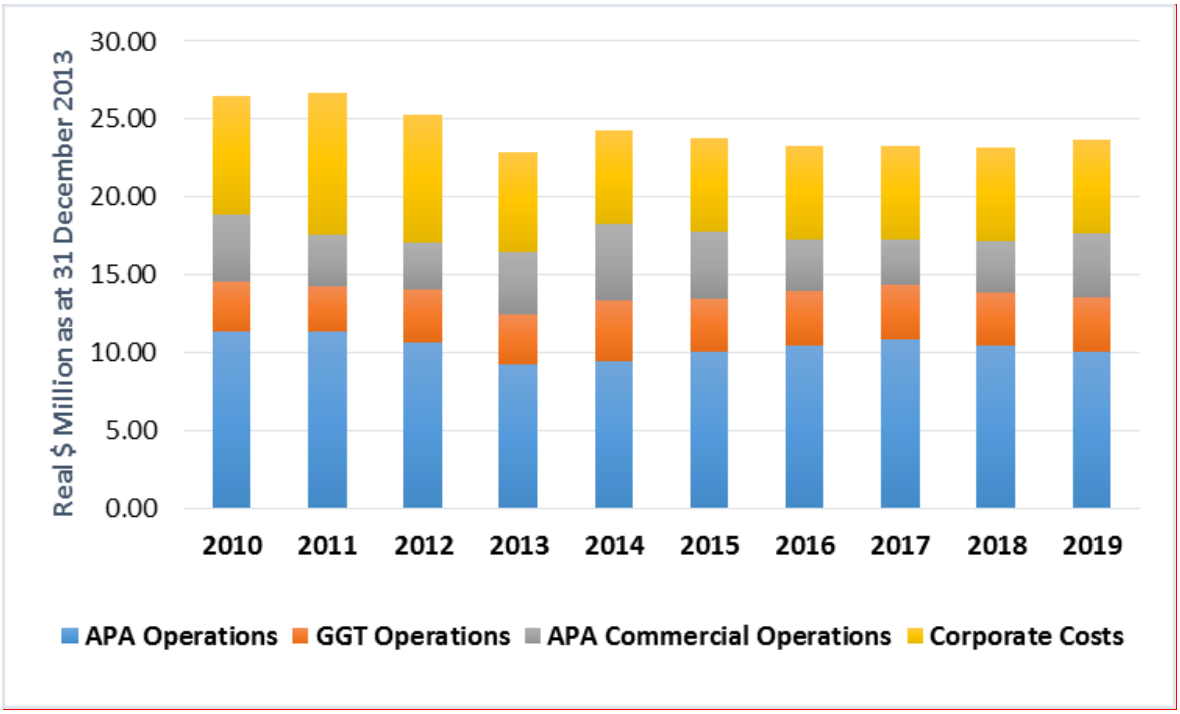
Table 3 GGT's Actual Operating Expenditure (AA2) and Proposed Forecast Operating Expenditure (AA3) by Category and Year[69]

Real $ million at 31 December 2013	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
APA Operations	11.32	11.34	10.63	9.20	9.46	10.03	10.43	10.82	10.39	10.08
GGT Operations	3.22	2.93	3.40	3.28	3.85	3.45	3.48	3.48	3.48	3.48
APA Commercial Operations	4.31	3.31	3.04	4.02	4.91	4.32	3.32	2.92	3.30	4.08
Corporate Costs	7.66	9.15	8.21	6.36	6.03	6.02	6.02	6.02	6.02	6.02
GGT Operating Expenditure	**26.51**	**26.73**	**25.29**	**22.86**	**24.25**	**23.83**	**23.26**	**23.25**	**23.20**	**23.67**

Source: Goldfields Gas Transmission Pty Ltd, Access Arrangement Revision Proposal Supporting Information, 15 August 2014, Tables 24 and 26, p.164 and p. 170.

[69] Real $ millions at 31 December 2013.

Figure 3 **GGT's Actual Operating Expenditure (AA2) and Proposed Operating Expenditure (AA3) by Category and Year (Real $ million at 31 December 2013)**



Source: Goldfields Gas Transmission Pty Ltd, Access Arrangement Revision Proposal Supporting Information, 15 August 2014, Tables 24 and 26, p. 164 and p. 170.

Issue 6 Operating Expenditure

Submissions are invited from interested parties on the following:

- Reasonableness of GGT's forecast operating expenditure for the third access arrangement period and compliance with rule 91 of the NGR.
- Appropriateness of GGT's method for forecasting operating expenditure from the budget.
- Appropriateness of selecting actual operating expenditure for 2012 to benchmark the efficient level of operating expenditure for the third access arrangement period and compliance with rule 91 of the NGR.
- Reasonableness of operating expenditure trends in relation to the base year.
- Appropriateness of the method of allocation of corporate costs from APA Group to GGT.
- Appropriateness of the method of allocation of corporate costs from GGP to the covered pipeline.

Opening Capital Base for AA3

115. Rule 77(2) of the NGR establishes the approach to determine the opening capital base for an access arrangement period that follows immediately on the conclusion of a preceding access arrangement period. The opening capital base for the later access arrangement period is to be:

- the opening capital base as at the commencement of the earlier access arrangement period adjusted for any difference between estimated and actual capital expenditure included in that opening capital base. This adjustment must also remove any benefit or penalty associated with any difference between the estimated and actual capital expenditure;

plus:

- conforming capital expenditure during the earlier access arrangement period;

plus:

- any amounts to be added to the capital base under rule 82, 84 or 86;

less:

- depreciation over the earlier period;
- redundant assets over the earlier period; and
- disposed assets over the earlier period.

116. Under rule 77(2) of the NGR, GGT's proposed opening capital base has been calculated using a roll-forward method that involves commencing with the opening value at the beginning of the third access arrangement period.

117. GGT proposes an opening capital base for the third access arrangement period of $396.55 million as at 1 January 2015.[70]

118. In its decision on Applications No. 1 and No.2 of 2010, the Electricity Review Board **(ERB**) determined that the reference tariff for the covered pipeline should be established by financial modelling for the period 20 August 2010 to 31 December 2014 (and not for the period 1 January 2010 to 31 December 2014). Therefore, the opening capital base for the second access arrangement period is the opening capital base established for the covered pipeline at 20 August 2010.

119. As per rule 77(2) of the NGR the opening capital base as at the commencement of the earlier access arrangement period needs to be adjusted for any difference between estimated and actual capital expenditure included in that opening capital base.

120. The Authority approved an opening capital base of $442.59 million[71] on 20 August 2010, which was calculated using a forecast of capital expenditure of $8.72 million for 2010. GGT proposed actual capital expenditure for 2010 as $0.66 million[72] in its

[70] Goldfields Gas Transmission Pty Ltd, *Proposed Revised Access Arrangement Information, 28 August 2014*, Table 10, p. 13.

[71] Goldfields Gas Transmission Pty Ltd, *Proposed Revisions to Access Arrangement Information*, 30 March 2012, Table 7, p. 9.

[72] Nominal $ million.

access arrangement information.[73] GGT has recalculated the opening capital base using GGT's proposed actual capital expenditure, removing a variation for non-depreciable assets and calculating depreciation using the straight line method on the forecast capital expenditure. GGT's proposed opening capital base on 20 August 2010 is $436.26 million.[74]

121. As noted in paragraph 23, the AEMC made a final rule change regarding rule 77(2) of the NGR in terms of setting the opening capital base from an earlier access arrangement period effective from 2 October 2014. This rule change requires the removal of any benefit or penalty associated with any difference between actual and estimated expenditure included in the opening capital base. Given that GGT submitted its access arrangement on 15 August 2014, before the final rule change was made, the benefit it made by incurring less capital expenditure than included in the opening capital base for setting tariffs for the second access arrangement period was not addressed by GGT in its access arrangement proposal.

122. GGT's proposed opening capital base includes $7.78 million in conforming capital expenditure less depreciation of $50.70 million for the second access arrangement plus an adjustment of $3.21 million for over-depreciation.[75]

123. GGT has not identified any amounts to be added to the capital base under rule 82, 84 or 86, or removed from the capital base for redundant or disposed of assets.

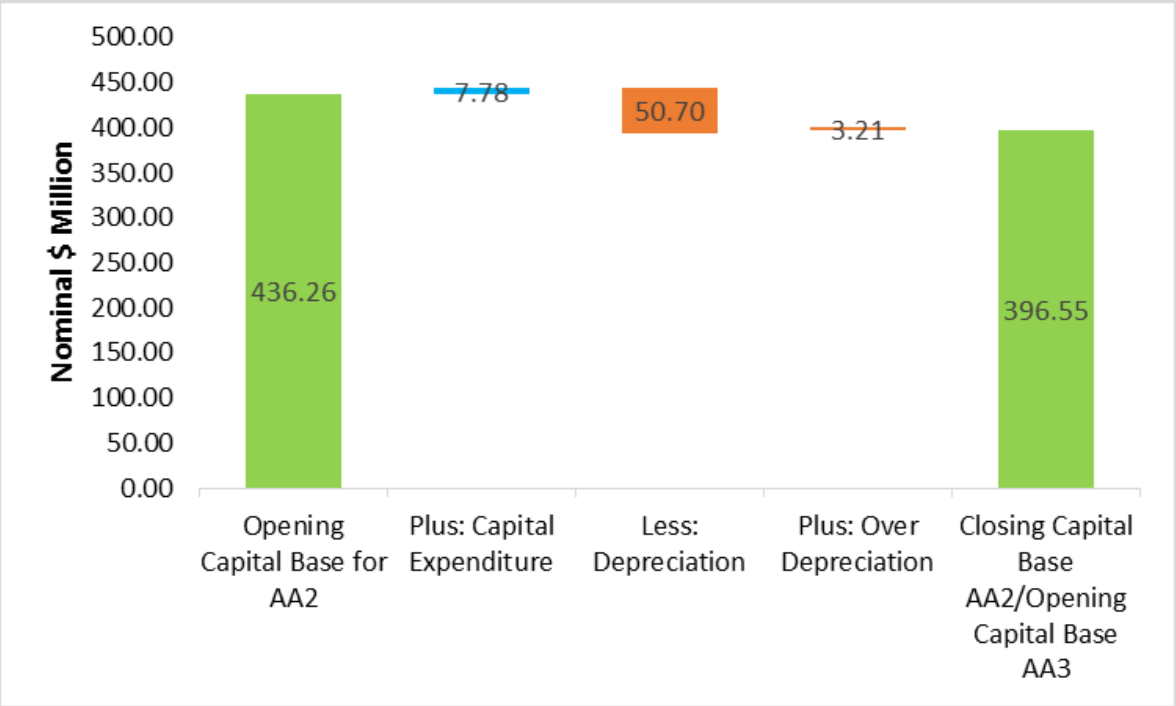
124. GGT's calculated values of the capital base at the commencement of the third access arrangement period are shown in Figure 4 below.

[73] Goldfields Gas Transmission Pty Ltd, *Proposed Revised Access Arrangement Information, 28 August 2014*, Table 2, p. 7.

[74] Goldfields Gas Transmission Pty Ltd, *Proposed Revised Access Arrangement Information, 28 August 2014*, Table 6, p. 10.

[75] Nominal $ million.

Figure 4 GGT's Proposed Opening Capital Base for Third Access Arrangement



Source: Goldfields Gas Transmission Pty Ltd, Proposed Revised Access Arrangement Information, 28 August 2014.

Issue 7 Opening Capital Base at the Commencement of the Earlier Access Arrangement period

Submissions are invited from interested parties on whether:

- The Authority should make an adjustment to account for the benefit received by GGT associated with the difference between the estimated and actual capital expenditure included in the opening capital base for the second access arrangement period?
- If the Authority is to make an adjustment for this benefit, how should it calculate the benefit received by GGT?

Past Conforming Capital Expenditure

125. Conforming capital expenditure is capital expenditure that conforms to the criteria under rule 79 of the NGR. The capital expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services. It must also be justifiable based on:
    - a positive overall economic value of the expenditure; or
    - the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the expenditure; or

- the expenditure is necessary:
  - to maintain and improve the safety of services; or
  - to maintain the integrity of services; or
  - to comply with a regulatory obligation or requirement; or
  - to maintain the service provider's capacity to meet levels of demand for services existing at the time of the capital expenditure is incurred.

126. GGT has proposed that its actual past capital expenditure is capital expenditure that conforms to the criteria under rule 79 of the NGR. Under rule 77(2) of the NGR capital expenditure must be 'conforming capital expenditure' in order to be added to the capital base.

127. GGT has assumed an inflation rate of 3 per cent when converting values from real to nominal and vice versa.[76] The Authority's approved forecast capital expenditure for the period 1 January 2010 to 31 December 2014 and GGT's proposed actual conforming capital expenditure are shown in real dollars in Table 4 below.

Table 4 Authority Approved Capital Expenditure and GGT's Proposed Conforming Capital Expenditure for Second Access Arrangement Period.[77]

Real $ million at 31 December 2013	Total Approved Forecast 2010-2014 (A)	Total Actual 2010-2014 (B)	Difference (B-A)
Pipeline and laterals	0.00	-0.06	(0.06)
Main line valve and scraper stations	0.07	0.00	(0.07)
Compressor stations	9.84	2.06	(7.78)
Receipt and delivery point facilities	0.35	0.49	0.14
SCADA and communications	5.40	2.64	(2.76)
Cathodic protection	2.97	0.00	(2.97)
Maintenance bases and depots	0.12	1.50	1.38
Remote accommodation	8.83	1.59	(7.24)
Other depreciable assets	0.00	0.00	0.00
Total	**27.57**	**8.22**	**(19.35)**

Source: Goldfields Gas Transmission Pty Ltd, Proposed Revised Access Arrangement Information, 28 August 2014, Goldfields Gas Transmission, Proposed Revisions to Access Arrangement Information, 5 August 2010.

128. The opening capital base for the second access arrangement commenced on 20 August 2010 not 1 January 2010, as explained in paragraph 116. As shown in Figure 4 GGT proposed to add $7.78 million ($7.76 million in real dollars) actual conforming capital expenditure for the second access arrangement period to the

[76] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Revision Proposal Supporting Information*, 15 August 2014, p. 58.

[77] For comparison purposes, figures have been converted from nominal to real dollars by the Authority using GGT's proposed inflation of 3 per cent.

opening capital base. GGT proposed conforming capital expenditure of $8.22 million[78] shown in Table 4 includes $7.76 million for the period 20 August 2010 to 31 December 2014 and $0.45 million for the period 1 January 2010 to 20 August 2010.

129. GGT's proposed actual conforming capital expenditure of $8.22 million is $19.35 million less than the forecast amount approved by the Authority. The expenditures for 2010 to 2013 are actual expenditures. The expenditure for 2014 is a forecast comprising actual expenditure for the period 1 January 2014 to 31 March 2014, and an estimate for the remainder of the year.

130. GGT proposes that capital expenditure undertaken in the second access arrangement period conforms to rule 79 of the NGR and should thus be considered conforming capital expenditure.

131. The variance in approved forecast expenditure and total actual expenditure for the second access arrangement period is largely a result of considerably lower expenditure in compressor stations, SCADA and communications and other depreciable assets.

132. GGT has proposed to include depreciation of $50.7 million[79] in the calculation of the opening capital base for the third access arrangement period. GGT included an amount of $0.38 million for over-depreciation for the period 2005 – 2009 in the opening capital base for the second access arrangement.

Issue 8 Past Conforming Capital Expenditure

Submissions are invited from interested parties on the following:

- GGT's proposed actual capital expenditure for the second access arrangement period and its conformance with the criteria in rule 79(1)(a) of the NGR.
- The adequacy of GGT's demonstration that its proposed actual capital expenditure in the second access arrangement period is justifiable under rule 79(2) of the NGR.

Projected Capital Base for AA3

133. Rule 78 of the NGR establishes the approach to determine the projected capital base for an access arrangement period.

134. GGT's proposed projected capital base has been calculated using a roll-forward method that involves commencing with the opening value at the beginning of the third access arrangement period in accordance with rule 78 of the NGR:

plus:

- forecast conforming capital expenditure for the period;

less:

- forecast depreciation for the period; and

[78] Real $ Million.

[79] Nominal $ Million.

- forecast disposed assets for the period.

135. GGT proposes a projected capital base for the third access arrangement period of $356.58 million at 31 December 2019.[80] GGT's proposed forecast closing capital base for each year of the third access arrangement period are shown in Table 5 below.

Table 5 GGT's proposed Projected Capital Base by Year for Third Access Arrangement Period.[81]

Nominal $ million	2015	2016	2017	2018	2019
Opening capital base	396.55	392.99	386.51	377.03	366.84
Capital expenditure	6.79	4.24	1.43	0.80	0.74
Depreciation	10.35	10.72	10.91	10.99	11.00
Closing capital base	392.99	386.51	377.03	366.84	356.58

Source: Goldfields Gas Transmission Pty Ltd, Proposed Revised Access Arrangement Information, 28 August 2014, Table 10, p. 13.

136. The projected capital base includes forecast conforming capital expenditure of $14.00 million less forecast depreciation of $53.97 million.[82]

Forecast Conforming Capital Expenditure

137. GGT proposes that its forecast capital expenditure for the third access arrangement period conforms to the criteria under rule 79 of the NGR. GGT's proposal must also conform to rule 74 of the NGR, which requires that forecasts and estimates must be supported by a statement of the basis of the forecast or estimate, must be arrived at on a reasonable basis and must represent the best forecast or estimate possible in the circumstances.

138. GGT has forecast to spend $12.86 million of capital expenditure over the third access arrangement period, which is 59 per cent greater than GGT's proposed actual capital expenditure for the second access arrangement period.

139. GGT's proposed capital expenditure in real dollars is shown in Table 6 below.

[80] Goldfields Gas Transmission Pty Ltd, *Proposed Revised Access Arrangement Information, 28 August 2014*, Table 10, p. 13.

[81] Nominal $ Million.

[82] Nominal $ Million.

Table 6 GGT's Proposed Conforming Capital Expenditure for Third Access Arrangement Period.[83]

Real $ million at 31 December 2013	2015	2016	2017	2018	2019	Total AA4
Pipeline and laterals	3.19	1.83	0.28	0.00	0.21	5.51
Main line valve and scraper stations	0.00	0.64	0.00	0.00	0.00	0.64
Compressor stations	1.01	0.82	0.00	0.21	0.29	2.33
Receipt and delivery point facilities	0.38	0.00	0.64	0.36	0.00	1.39
SCADA and communications	0.53	0.46	0.19	0.04	0.04	1.27
Cathodic protection	0.10	0.03	0.08	0.02	0.02	0.26
Maintenance bases and depots	0.62	0.00	0.00	0.00	0.00	0.62
Other depreciable assets	0.56	0.10	0.07	0.05	0.05	0.84
Total	**6.40**	**3.88**	**1.27**	**0.69**	**0.62**	**12.86**

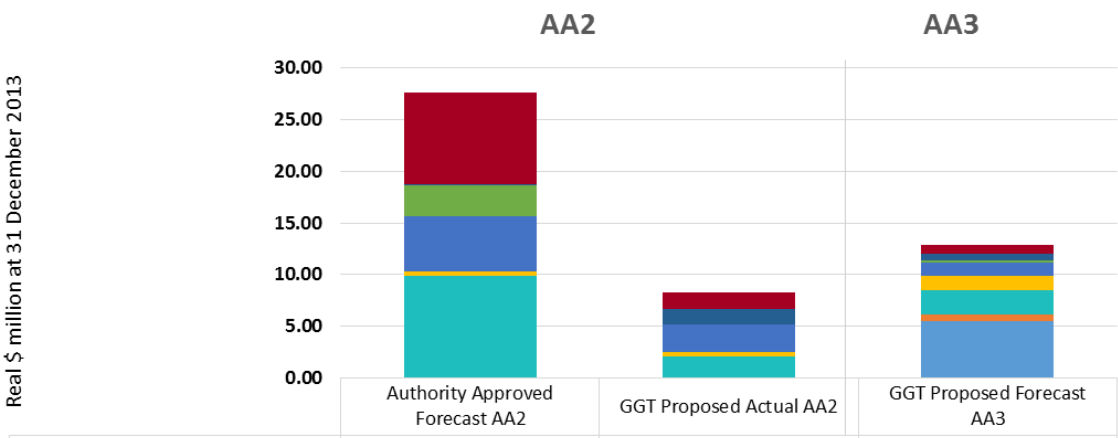
Source: ERA Analysis.

140. GGT states that the majority of the increase is driven by expenditure in pipeline and laterals, which is $5.7 million higher in GGT's proposal for the third access arrangement period than the actual expenditure in the second access arrangement period.

141. A comparison of the Authority's approved forecast and GGT's proposed actual capital expenditure for the second access arrangement period and GGT's proposed forecast capital expenditure for the third access arrangement period is shown in Figure 5 below.

[83] Figures have been converted from nominal to real dollars by the Authority using GGT's proposed inflation of 3 per cent.

Figure 5 Authority Approved Forecast Capital expenditure for AA2 and GGT's Proposed Conforming Capital Expenditure for AA2 and AA3[84]



	Authority Approved Forecast AA2	GGT Proposed Actual AA2	GGT Proposed Forecast AA3
Other assets	8.83	1.59	0.84
Maintenance bases and depots	0.12	1.50	0.62
Cathodic protection	2.97	0.00	0.26
SCADA and communications	5.40	2.64	1.27
Receipt and delivery point facilities	0.35	0.49	1.39
Compressor stations	9.84	2.06	2.33
Main line valve and scraper stations	0.07	0.00	0.64
Pipeline and laterals	0.00	-0.06	5.51

Source: Goldfields Gas Transmission Pty Ltd, Tariff Model, 15 August 2014.

Depreciation of the third access arrangement Capital Base

142. As noted above under the heading 'Depreciation of the Capital Base', the NGR sets out certain requirements in relation to forecast depreciation.

143. GGT's projected capital base includes forecast depreciation of $53.97 million[85] over the third access arrangement period. GGT proposes that the depreciation schedule for the third access arrangement period should be calculated using the straight line method. GGT explains its derivation of depreciation in section 6.8 of its access arrangement revision proposal supporting information. The Authority sets out GGT's treatment of depreciation in paragraphs 76 to 84. GGT's proposed forecast depreciation expenditure is shown in Table 7 below.

[84] Figures converted from nominal to real dollars by the Authority using GGT's proposed inflation of 3 per cent.

[85] Nominal $ million.

Table 7 GGT Forecast Depreciation 2015-2019

Nominal $ million	2015	2016	2017	2018	2019	Total AA4
Pipeline and laterals	6.81	6.81	6.86	6.89	6.89	34.26
Main line valve and scraper stations	0.21	0.21	0.21	0.22	0.22	1.06
Compressor stations	2.62	2.68	2.72	2.75	2.75	13.51
Receipt and delivery point facilities	0.11	0.12	0.13	0.13	0.16	0.65
SCADA and communications	0.17	0.31	0.34	0.37	0.37	1.56
Cathodic protection	0.12	0.12	0.13	0.13	0.13	0.62
Maintenance bases and depots	0.18	0.21	0.22	0.22	0.22	1.06
Other depreciable assets	0.13	0.26	0.30	0.28	0.26	1.24
Total	**10.35**	**10.72**	**10.91**	**10.99**	**11.00**	**53.97**

Source: Goldfields Gas Transmission Pty Ltd, Proposed Revised Access Arrangement Information, 28 August 2014, Table 8, p. 11.

Issue 9 Forecast Conforming Capital Expenditure

Submissions are invited from interested parties on the following:

- GGT's forecast of conforming capital expenditure for the third access arrangement period and the reasonableness of the basis for determining the forecast to represent the best possible forecast or estimate in the circumstances.
- The adequacy of GGT's demonstration that its forecast of conforming capital expenditure for the third access arrangement period meets the requirements for conforming capital expenditure under rule 79 of the NGR.

Issue 10 Depreciation

Submissions are invited from interested parties on the following:

- GGT's calculation of its forecast depreciation.

Pipeline Services

144. A "pipeline service" is defined under section 2 of the NGL(WA) as a service that is provided by means of a pipeline including a haulage service, an interconnection service, or an ancillary service. Under rule 48 of the NGR, a full access arrangement proposal must describe the pipeline services that the service provider proposes to offer to provide by means of a pipeline, and specify the reference services. Rule 101 of the NGR defines a reference service as a pipeline service that is likely to be sought by a significant part of the market.

145. Using the covered pipeline, GGT provides a firm gas transportation service and a negotiated service.

146. GGT proposes to continue to provide firm gas transportation service as a reference service. The firm gas transportation service is a service by which GGT receives from and delivers to a user a gas quantity that does not exceed the Maximum Daily Quantity (**MDQ**) that is specified in the user's transportation agreement. GGT has revised the minimum term of a transportation agreement for a firm service from 12 months to five years, which it notes is consistent with the majority of contracts on the GGP, which have terms of five years or longer. GGT notes that shorter term contracts are potentially available as negotiated services.

147. GGT proposes to continue to provide negotiated gas transportation service as a non-reference service. The negotiated gas transportation service is a service that meets the specific needs of a user. Examples of this service include as-available and interruptible services. GGT also proposes that any transportation agreement for a term of less than five years correspond to a negotiated gas transportation service.

148. GGT has included a new section into the pipeline services section of is proposed access arrangement relating to the MDQ and Maximum Hourly Quantity (**MHQ**) titled '2.2.2 MDQ and MHQ'. This section requires at the commencement of the Transportation Agreement the user to establish for each Contract year, a Firm MDQ and a Firm MHQ, remembering that GGT has proposed to revise the minimum term of a Transportation Agreement for a firm service to 5 years as discussed previously.

149. Another new section included in the proposed access arrangement relates to an adjustment in MDQ for Gross Heating Value, section 2.2.3 of the proposed access arrangement.

150. This section adjusts the obligation on the service provider to receive gas for or on behalf of the User for that day and the obligation of the service provider to deliver gas for and on behalf of the user using a specific formula. This section also adjusts the Toll Charge, Capacity Reservation Charge and the Throughput Charge.

151. These adjustments come about due to the change in the terms and conditions of the Delivery Gas Specification minimum for the Gross Heating Value (**GHV**) up from currently 35.5 MJ/m^3 to 37.0 MJ/m^3.

152. GGT has noted that the minimum GHV for the Dampier to Bunbury Natural Gas Pipeline (**DBNGP**) is 37.0 MJ/m^3 and that gas supplied to BHP Billiton Nickel West is currently delivered onto the GGP from the DBNGP.

153. As a result, GGT has proposed that the minimum GHV of the gas specification of the GGP access arrangement be consistent with the DBNGP and reset to 37.0 MJ/m^3.

154. Some other new sections in the pipeline services section of the proposed access arrangement include:

- Overruns – GGT has noted that this section replaces the section 'Supplementary Quantity Option' contained in the General Terms and Conditions of the previous access arrangement. GGT notes that the changes relate to aligning terminology and approach with other APA group access arrangements.
- Technical specification for connecting to the Pipeline – GGT has noted that this section makes it clear that provision of the Firm Service is subject to technical specifications in the transportation agreement.

- Gas specification and commingling – GGT has noted that this section makes it clear that provision of the firm service is subject to compliance with the gas specification and includes commingling provisions.
- Title to the gas – This section includes a change from previous access arrangements in that title to the gas does not pass to the service provider on receipt of the gas at the Receipt Point. GGT notes that this change is consistent with other APA Group access arrangements.

Issue 11 Pipeline Services

Submissions are invited from interested parties on the following:

- Are the substantial changes made in the pipeline services section of the proposed access arrangement, including but not limited to the change of term from 12 months to five years; the setting of MDQ and MHQ for the term of the contract at the beginning of the Transportation Agreement; the adjustments to charges as a result in the changing of the minimum GHV up to 37.0 MJ/m3; and the change in the timing for the transfer of title to gas to the service provider consistent and aligned to the relevant sections of the NGR and NGL?
- Whether the negotiated gas transportation service (including as-available service, interruptible service, and service with transportation agreement of a term of less than five years) is sought by a significant part of the market.

Reference Tariffs

155. Rule 95 of the NGR sets out the requirements for the determination of reference tariffs for transmission pipelines. Rule 95(1) of the NGR states that a tariff must be designed:

    (a) to generate from the provision of each reference service the portion of total revenue referable to that reference service; and

    (b) as far as is practicable consistently with paragraph (a), to generate from the user, or the class of users, to which the reference service is provided, the portion of total revenue referable to providing the reference service to the particular user or class of users.

156. Rule 95 of the NGR also determines how total revenue is apportioned to reference services and to particular user or class of users. The Authority's discretion under this rule is limited.

157. Rules 92 and 97 of the NGR set out requirements for an access arrangement to include a mechanism for variation of reference tariffs during an access arrangement period.

158. Rule 92 of the NGR states that the reference tariff variation mechanism must be designed to equalise (in terms of present values) forecast revenue from reference services over the access arrangement period, and the portion of total revenue allocated to reference services for the access arrangement period.

159. Rule 97 of the NGR states that a formula for variation of a reference tariff may (for example) provide for:

- variable caps on the revenue to be derived from a particular combination of reference services; or
- tariff basket price control; or
- revenue yield control; or
- a combination of all or any of the above.

160. Rule 97 of the NGR also states that in deciding whether a particular reference tariff variation mechanism is appropriate, the Authority must have regard to relevant factors such as:

- the need for efficient tariff structures;
- the administrative costs of the reference tariff variation mechanism;
- the regulatory arrangements (if any) applicable to the relevant reference services before the commencement of the proposed reference tariff variation mechanism; and
- the desirability of consistency between regulatory arrangements for similar services (both within and beyond the relevant jurisdiction).

Reference tariffs and charging parameters

161. GGT's proposed reference tariffs and methodology are outlined in section 12 of the proposed revised access arrangement information and section 3.4 of the access arrangement supporting information. [86, 87]

162. The current reference tariffs have applied since 1 July 2014, and will continue to apply until a new access arrangement is in place. GGT has calculated the proposed reference tariffs based on the assumption that the tariffs will be effective from 1 January 2015.

163. GGT is proposing to retain the three-part reference tariff which has been in place since the GGP Access Arrangement was approved by the ERA in 2005. This three-part tariff comprises:

- toll charge (a price per GJ of contracted capacity (MDQ));
- capacity reservation charge (a price per GJ MDQ kilometre); and
- throughput charge (a price for GJ kilometre).

164. GGT has elected to keep the same allocation of total revenue to reference tariff components as the two preceding access arrangement periods.[88] GGT proposes to allocate total revenue to reference tariff components as follows:

- 11.3 per cent to toll charge;
- 72.2 per cent to capacity reservation charge; and
- 16.5 per cent to throughput charge[89].

[86] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Information*, 28 August 2014, pp. 23–24.

[87] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Supporting Information*, 15 August 2014, p. 28.

[88] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Supporting Information*, 15 August 2014, p. 189.

[89] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Information*, 28 August 2014, Table 14, p. 23.

165. GGT's proposed revised reference tariff for the Covered Pipeline is shown in Table 8.

Table 8 GGT Proposed Revised Reference Tariff

Tariff Component	Tariff
Toll Charge ($/GJ MDQ)	0.235806
Capacity Reservation Charge ($/GJ MDQ KM)	0.001459
Throughput Charge ($/GJ KM)	0.000442

Source: Goldfields Gas Transmission Pty Ltd, Proposed Revised Access Arrangement Information, 28 August 2014.

Changes to GGT's Tariff Variation Mechanism

166. GGT proposes to amend its tariff variation mechanism in Section 4.5 and Schedule A of its proposed revised access arrangement, so that it now accords with the requirements of the NGR. GGT's tariff variation mechanism was formerly set out in section 5.3 and Schedule 1 of the access arrangement and clause 9.8 of the terms and conditions.

167. GGT's proposed revised reference tariff variation mechanism comprises two parts:

- scheduled reference tariff variation mechanism; and
- cost pass-through variation of the reference tariff.

168. The scheduled reference tariff variation mechanism further provides for:

- quarterly scheduled variation of the reference tariff; and
- annual scheduled variation of the reference tariff.

169. GGT proposes to add a component to the existing annual scheduled reference tariff variation mechanism. The component has the effect of annually updating, during the access arrangement period, the return on debt used in reference tariff determination.[90]

170. GGT proposes to replace the adjustment for change in imposts in its current access arrangement with a cost pass-through event notice. GGT has included the following defined cost pass-through events in Section 4.5.2 of its access arrangement[91]:

- insurance cap event;
- insurer credit risk event;
- natural disaster event;
- regulatory change event;
- service standard event;
- tax change event; and
- terrorism event.

[90] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Revision Proposal Supporting Information*, 15 August 2014, pp. 192-193.

[91] Goldfields Gas Transmission Pty Ltd, *Proposed Revised Access Arrangement*, 15 August 2014, Section 4.5.2, pp. 19–22.

171. GGT notes that the NGR does not set out a process through which a service provider notifies the regulator of a proposed reference tariff variation. GGT has incorporated the process and timelines for assessment that applied previously under the Code into its proposed revised access arrangement.

172. GGT has added a new section 4.6 to its access arrangement that explains the tariff that will apply if the next access arrangement does not commence on the anticipated revisions commencement date.

Issue 12 Reference Tariff Variation Mechanism

Submissions are invited from interested parties on the following:

- GGT's proposed changes to the reference tariff variation mechanism and consistency with the NGR.

Other Access Arrangement Provisions

173. As discussed previously in the issues paper this is GGT's first access arrangement submitted in accordance with the requirements of the NGL and NGR. GGT's previous access arrangements were considered under the Code.

174. GGT has noted that the access arrangement has been revised to be consistent with the requirements of the NGR and NGL and that changes made are largely associated with the adoption of new terms used in the NGR and NGL and to comply with these new requirements.

175. GGT has also modified the access arrangement to align with the current form and structure of other APA Group access arrangements. GGT considers that its proposed revisions to the access arrangement are necessary and appropriate, and that they are consistent with the national gas objective outlined in section 23 of the NGL.

Trigger Event

176. GGT has proposed not to include a Trigger Event in its proposed access arrangement provisions. A trigger event can be used to advance to an earlier date the access arrangement review submission date which is fixed in an access arrangement.

177. Rule 51 of the NGR sets out under what circumstances the acceleration of the review submission date can occur, being the occurrence of a trigger event. Rule 51(2) provides examples of trigger events being:

1) A re-direction of the flow of natural gas though the pipeline.
2) A competing source of natural gas becomes available to customers served by the pipeline.
3) A significant extension, expansion or interconnection occurs.

178. Under the Code, GGT was required to include in its access arrangement a clause on trigger events regarding the review and expiry of the access arrangement. Rule

51 of the NGR states that the review submission date fixed in an access arrangement advances to an earlier date if the access arrangement provides for acceleration of the review submission date on the occurrence of a trigger event.

179. As a result, GGT is not required to include a trigger event clause in order to accelerate the review submission date. GGT has not, as mentioned above, included a trigger event in its proposed access arrangement.

180. GGT has noted that the circumstances which would have triggered an access arrangement revision in accordance with clause 3.4 of its current access arrangement, have now passed.

181. GGT's view is that the triggering of revisions to an access arrangement by pipeline expansion is inconsistent with the scheme of incentive regulation in the NGL and the NGR.

Capacity Trading

182. GGT has proposed substantial changes to the section on capacity trading. Rule 105 of the NGR sets out the Capacity Trading Requirements to be included in an access arrangement.

183. GGT has included at section 6.2 of its proposed access arrangement details on the assignment of contracted capacity by subcontract which it believes meets the requirements of rule 105(2) of the NGR.

184. Section 6.3 of GGT's proposed access arrangement titled, Other Assignments, sets out the capacity trading requirements for a user to transfer all or any of the user's contracted capacity to another third party with the service providers consent with certain consequences.

185. GGT has noted that section 6.3 of GGT's proposed access arrangement covers the requirements outlined in section 105(3), 105(4) and 105(5) of the NGR. In this section GGT sets out a number of points that must be met in order for the service provider to provide its consent.

Queuing Policy and Requests for Access

186. GGT's current access arrangement was prepared under the legislative requirement of the Code. GGT's queuing policy for the proposed access arrangement has been drafted in accordance with the requirements of the NGR and NGL. The relevant rules on which this draft queuing policy has been constructed are sections 103 and 112 of the NGR. Rule 103 of the NGR relates to queuing requirements and rule 112 of the NGR deals with requests for access.

187. Rule 103 of the NGR requires that queuing requirements must establish a process or mechanism (or both) for establishing an order of priority between prospective users of spare or developable capacity and are treated on a fair and equal basis. Also that the queuing requirements must be sufficiently detailed to enable a prospective user to understand the basis on which the order of priority is determined and, if a queue has been established, to determine the prospective user's position in the queue.

188. GGT has noted that prospective users of the GGP have found application for existing or developable capacity, following the process set out in the GGT Information Package, complex and subject to uncertainty.

189. GGT's queuing policy in the current access arrangement operates on a 'first-come-first-served' priority basis. Rule 103(4) of the NGR gives the option of either a first-come-first-served basis or on the basis of a publically notified auction in which all prospective user of the relevant spare capacity or developable capacity are able to participate.

190. GGT has proposed for the third access arrangement to incorporate a publicly notified auction in which all prospective users of spare capacity can participate. For spare capacity of less than 2TJ, GGT may elect not to run an auction for that capacity and will make that spare capacity available by placing it on the Spare Capacity register which will operate on a first come first served basis.

191. GGT considers that the adoption of a public auction in the form set out in the proposed access arrangement better meets the national gas objective than a first come, first served queuing policy.

Extensions and Expansions Policy

192. The applicable legislation for extensions and expansions of the GGP are rule 104 of the NGR which sets out the extension and expansion requirements and section 18 of the NGL which relates to certain extensions to, or expansions of the capacity of, pipelines to be taken to be part of a covered pipeline.

193. In this access arrangement GGT has proposed very minor changes to the extensions and expansions section that was previously drafted in accordance with the Code. Changes made relate predominately to referencing the NGR and NGL in place of the Code and changes in terminology as a result of the legislation change.

194. Despite changing from the Code to the NGR and NGL, very little content is changed to the extensions and expansions section.

195. The Authority notes that it made a determination on an election by GGT for an expansion to the GGP to be not covered on 30 May 2014. This application was determined under the existing legislation at the time (the Code).

196. In its determination, the Authority noted that GGT applied to the Authority for approval just as the expansion capacity was nearing its commissioning date. The Authority considered that this was contrary to the requirements of the GGP access arrangement that GGT apply for approval in relation to any 'proposed expansion'.

197. The Authority considered that GGT should have applied earlier, when the expansion was first being considered, prior to Final Investment Decision. The Authority then could have engaged with GGT to ensure that its coverage determination occurred in a timely way, and related to an expansion of optimal size, given the prospective demand.

Issue 13 Other Access Arrangement Provisions

Submissions are invited from interested parties on the following:

- Is GGT's proposed access arrangement consistent with the NGO as outlined in the NGL?
- Should GGT's access arrangement include a clause for a Trigger Event that would accelerate the access arrangement review submission date?
- Do the requirements outlined in GGT's Capacity Trading section align with the requirements set out in rule 105 and rule 106 of the NGR for capacity trading and the change of receipt or delivery points by a user?
- Does GGT's Queuing Policy achieve the objectives of rule 103 of the NGR, in that GGT has established a process or mechanism (or both) for establishing an order of priority between prospective users of spare or developable capacity and are treated on a fair and equal basis? Also, are the queuing requirements sufficiently detailed to enable prospective users to understand the basis on which the order of priority is determined and, if a queue has been established, to determine the prospective user's position in the queue?
- Does GGT's Extensions and Expansions section of the proposed access arrangement meet the requirements of both the NGR and NGL?

Terms and Conditions

198. The NGR requires an access arrangement proposal to detail, in addition to the reference tariff, the terms and conditions for each reference service.

199. GGT has undertaken a comprehensive revision of the terms and conditions applying to the provision of the reference service (firm gas transportation service) for the following reasons:
    - align terms and conditions with APA Group's national operations;
    - comply with the NGR (previous access arrangement was under the Code); and
    - remove obsolete terms and conditions.

200. GGT's proposed terms and conditions are set out in Schedule D of the GGP access arrangement. GGT has provided a high level review of its proposed changes to its current terms and conditions in sections 2.2 of the access arrangement supporting information.[92] GGT has provided a log of proposed changes to the terms and conditions in Attachment 1 of its access arrangement.

[92] Goldfields Gas Transmission Pty Ltd, *Goldfields Gas Pipeline: Access Arrangement Revision Proposal – Supporting Information*, 15 August 2014, Section 2.2, pp. 9-13.

201. Table 9 contains a summary of GGT's significant proposed changes to the terms and conditions.

Table 9 Summary of GGT's Proposed Changes to Terms of Conditions

Section	Main Changes	GGT Reason for change
Service	Section 4 is relocated.	GGT has replaced the Order Form concept with a Transportation Agreement.
Forecast and Nominations Procedures	Section 5 relocated and parts deleted.	Changes are consistent with other APA access arrangement terms and conditions. Nominations are revised down from 7 to 3 days.
Scheduling	There is no provision in the current terms and conditions.	The scheduling provisions of the APA Roma Brisbane Pipeline Access Arrangement have been adopted.
Connections	Section 6 has been relocated and some parts deleted.	A number of clauses are removed as GGT states they are not part of the terms and conditions on which the firm service is to be provided. GGT states that the specific terms and conditions of interconnection are left to the negotiation of connection agreements as they vary greatly depending on the pipeline.
Transportation Tariff and Charges	Section 9 relocated to Section 4 of the Access Arrangement.	More appropriate to keep in access arrangement, reference tariff variation mechanism and bond/deposits clause have also been adjusted.
Possession, Responsibility and Title	Section 14 relocated within the terms and conditions with revised clauses and one new clause.	Changes are consistent with other APA access arrangement terms and conditions. Introduced the concept of System Use Gas and title to gas after termination of a Transportation Agreement.
Termination	Section 16 replaced by new clauses.	Amended to simplify and streamline processes. Also, instead of setting out two separate rights for the User and Service Provider, there are now mutual rights.
Force Majeure	Section 17 has been relocated and revised.	Changes are consistent with other APA access arrangement terms and conditions. Obligations will be suspended has been simplified and amended to the extent performance is affected rather than specifying failure to accept or deliver gas or performance obligations.
Liabilities and Indemnities	Section 18 has been replaced with new clauses and parts have been deleted.	GGT considers that the revised liability and indemnity provisions reflect a more appropriate allocation of risk between the service provider and the user.
Insurances	Section 19 has been deleted.	Changes are consistent with the standard form contracting approach and other APA other access arrangement terms and conditions.

Section	Main Changes	GGT Reason for change
Assignment and Transfer of Capacity	Section 20 has been relocated and revised, and some parts have been deleted.	Restrictions on Assignment updated to include right to assign obligations as well as rights. Also updated to provide that consent cannot be withheld if the assignee is financially and technically capable of performing the assigned rights and obligations.
Confidential Information	Section 21 has been deleted and replaced.	Changes are consistent with APA's other access arrangement terms and conditions. The obligations have been simplified and consent for disclosure is now required unless certain circumstances exist.
Dispute Resolution	Section 22 has been deleted and replaced.	The concept of referral of disputes to an expert or arbitrator has been replaced with referral to each party's representative and then senior representatives.
Arbitration	Section 23 has been deleted and replaced.	The concept of referral of disputes to an expert or arbitrator has been replaced with referral to each party's representative and then senior representatives.

Source: GGT, Access Arrangement for the Goldfields Gas Pipeline, 15 August 2014, Attachment 1.

Issue 14 Terms and Conditions

Submissions are invited from interested parties on the following:

- GGT's proposed changes to the Terms and Conditions for the reference service.
- Any concerns regarding the movement of clauses from the Terms and Conditions to the main sections of the Access Arrangement.
- Consistency of GGT's proposed terms and conditions with the NGR.

Appendices

Appendix 1 Summary of Issues

Issue 1 Total Revenue and Cost Allocation

- Submissions are invited from interested parties on GGT's approach to allocate all costs on a standalone basis to the covered pipeline and whether this is consistent with the NGR and NGO.

Issue 2 Rate of Return on the Regulatory Asset Base

Submissions are invited from interested parties on the following:

- GGT's departure from the Rate of Return Guidelines.
- GGT's proposed approach to estimating the cost of debt for the benchmark efficient entity, and its consistency with the requirements of the NGL and the NGR, and the allowed rate of return objective in particular.
- GGT's proposed approach to estimating the return on equity, and its consistency with the requirements of the NGL and NGR, and the allowed rate of return objective in particular.

Issue 3 Depreciation of the Capital Base

Submissions are invited from interested parties on the following:

- Whether straight line depreciation on the historic cost of the asset (the Historic Cost accounting approach) meets the requirements of rule 89 of the NGR.
- Whether alternative approaches, such as indexed straight line depreciation (the Current Cost Accounting approach) meets the requirements of rule 89 of the NGR.

Issue 4 Estimated Cost of Corporate Income Tax

Submissions are invited from interested parties on the:

- use of the straight line method in calculating tax depreciation;
- reasonableness of the asset lives assumed in the Tax Asset Base; and
- appropriateness of the estimate of the parameter gamma (γ)

Issue 5 Total Revenue

Submissions are invited from interested parties on the following:

- The appropriateness of GGT estimating the cost of corporate income tax from the forecast revenue from the reference services, negotiated services and services to the GGT Joint Venture participants using the covered pipeline.

Issue 6 Operating Expenditure

Submissions are invited from interested parties on the following:

- Reasonableness of GGT's forecast operating expenditure for the third access arrangement period and compliance with rule 91 of the NGR.
- Appropriateness of GGT's method for forecasting operating expenditure from the budget.
- Appropriateness of selecting actual operating expenditure for 2012 to benchmark the efficient level of operating expenditure for the third access arrangement period and compliance with rule 91 of the NGR.
- Reasonableness of operating expenditure trends in relation to the base year.

- Appropriateness of the method of allocation of corporate costs from APA Group to GGT.
- Appropriateness of the method of allocation of corporate costs from GGP to the covered pipeline.

Issue 7 Opening Capital Base at the Commencement of the Earlier Access Arrangement period

Submissions are invited from interested parties on whether:

- The Authority should make an adjustment to account for the benefit received by GGT associated with the difference between the estimated and actual capital expenditure included in the opening capital base for the second access arrangement period?
- If the Authority is to make an adjustment for this benefit, how should it calculate the benefit received by GGT?

Issue 8 Past Conforming Capital Expenditure

Submissions are invited from interested parties on the following:

- GGT's proposed actual capital expenditure for the second access arrangement period and its conformance with the criteria in rule 79(1)(a) of the NGR.
- The adequacy of GGT's demonstration that its proposed actual capital expenditure in the second access arrangement period is justifiable under rule 79(2) of the NGR.

Issue 9 Forecast Conforming Capital Expenditure

Submissions are invited from interested parties on the following:

- GGT's forecast of conforming capital expenditure for the third access arrangement period and the reasonableness of the basis for determining the forecast to represent the best possible forecast or estimate in the circumstances.
- The adequacy of GGT's demonstration that its forecast of conforming capital expenditure for the third access arrangement period meets the requirements for conforming capital expenditure under rule 79 of the NGR.

Issue 10 Depreciation

Submissions are invited from interested parties on the following:

- GGT's calculation of its forecast depreciation.

Issue 11 Pipeline Services

Submissions are invited from interested parties on the following:

- Are the substantial changes made in the pipeline services section of the proposed access arrangement, including but not limited to the change of term from 12 months to five years; the setting of MDQ and MHQ for the term of the contract at the beginning of the Transportation Agreement; the adjustments to charges as a result in the changing of the minimum GHV up to 37.0 MJ/m3; and the change in the timing for the transfer of title to gas to the service provider consistent and aligned to the relevant sections of the NGR and NGL?
- Whether the negotiated gas transportation service (including as-available service, interruptible service, and service with transportation agreement of a term of less than five years) is sought by a significant part of the market.

Issue 12 Reference Tariff Variation Mechanism

Submissions are invited from interested parties on the following:

- GGT's proposed changes to the reference tariff variation mechanism and consistency with the NGR.

Issue 13 Other Access Arrangement Provisions

Submissions are invited from interested parties on the following:

- Is GGT's proposed access arrangement consistent with the NGO as outlined in the NGL?
- Should GGT's access arrangement include a clause for a Trigger Event that would accelerate the access arrangement review submission date?
- Do the requirements outlined in GGT's Capacity Trading section align with the requirements set out in rule 105 and rule 106 of the NGR for capacity trading and the change of receipt or delivery points by a user?
- Does GGT's Queuing Policy achieve the objectives of rule 103 of the NGR, in that GGT has established a process or mechanism (or both) for establishing an order of priority between prospective users of spare or developable capacity and are treated on a fair and equal basis? Also, are the queuing requirements sufficiently detailed to enable prospective users to understand the basis on which the order of priority is determined and, if a queue has been established, to determine the prospective user's position in the queue?
- Does GGT's Extensions and Expansions section of the proposed access arrangement meet the requirements of both the NGR and NGL?

Issue 14 Terms and Conditions

Submissions are invited from interested parties on the following:

- GGT's proposed changes to the Terms and Conditions for the reference service.
- Any concerns regarding the movement of clauses from the Terms and Conditions to the main sections of the Access Arrangement.
- Consistency of GGT's proposed terms and conditions with the NGR.

Appendix 2 Access Arrangement Review Process

A service provider must, on or before the review submission date of an applicable access arrangement, submit an access arrangement revision proposal (access arrangement proposal) to the Authority in accordance with rule 52 of the NGR.

The service provider must also provide information necessary to understand the proposal as well as the basis for deriving elements of the proposal which is referred to as access arrangement information as per rule 43(1) of the NGR. In addition, a service provider may wish to provide further information to support its proposal.

In accordance with rule 58 of the NGR, the Authority must as soon as practicable publish an initiating notice, along with the access arrangement proposal on its website. The initiating notice must include an invitation for written submissions on the access arrangement proposal of at least 20 business days.

Following this consultation process, the Authority must make a draft decision and indicate whether the Authority is prepared to approve or not approve the access arrangement proposal under rule 59 of the NGR. The draft decision represents the Authority's assessment of the proposed requirements under the NGL(WA) and NGR, current access arrangement provisions, the service provider's access arrangement proposal, and submissions from interested parties.

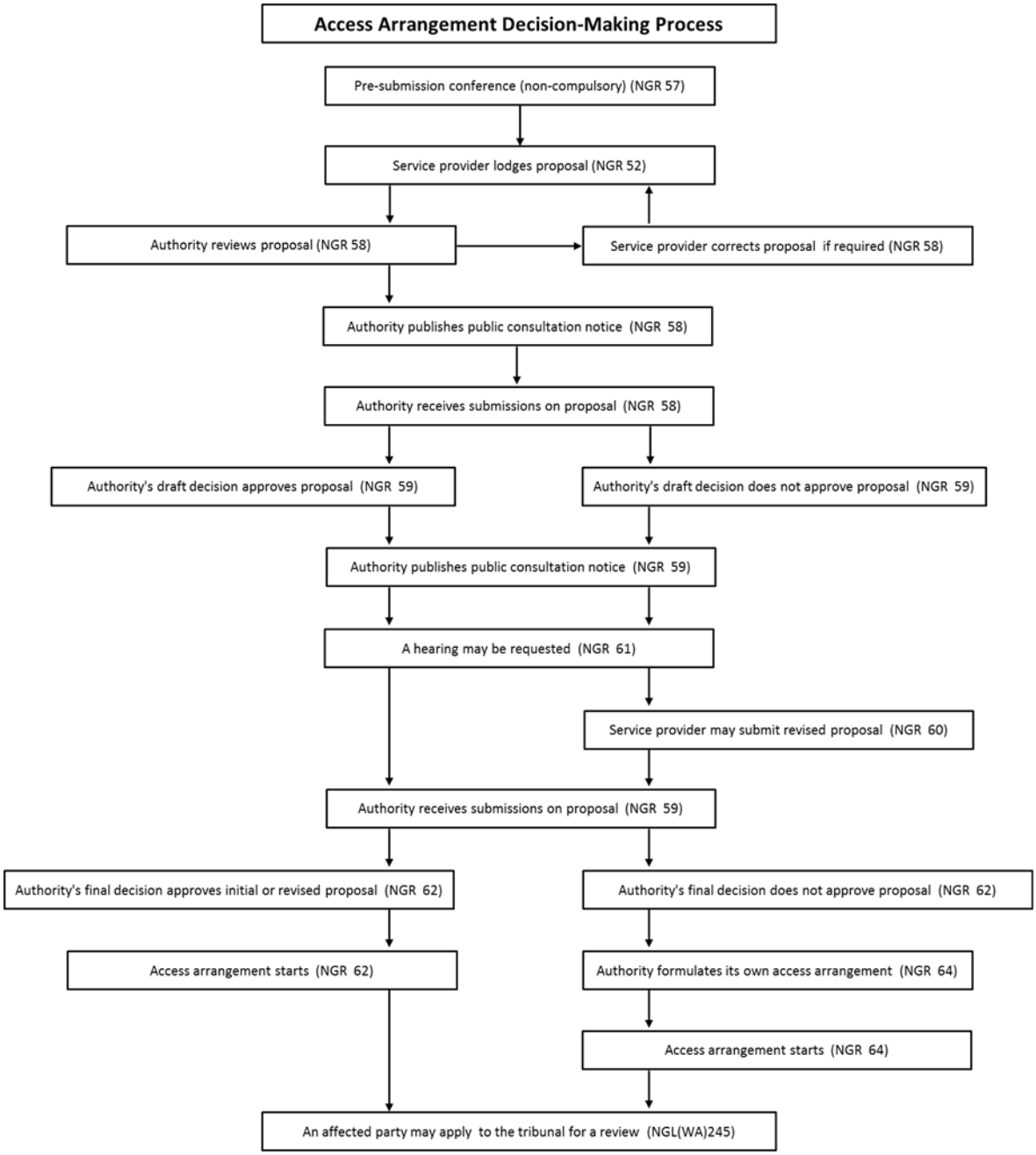
Under rule 60 of the NGR, the service provider may, within the period allowed by the draft decision (at least 15 business days), submit additions or other amendments to the access arrangement proposal to address matters raised in the draft decision. The service provider must provide amendments to the Authority in a revised access arrangement proposal. The Authority must publish the revised access arrangement proposal on its website as soon as practicable and invite submissions from interested parties on the revised proposal and draft decision for a period of at least 20 business days.

After the Authority considers the revised access arrangement proposal, further submissions from interested parties, and any other matters the Authority considers relevant, the Authority must make a final decision as required under rule 62 of the NGR. The final decision is a decision to approve or refuse to approve the access arrangement proposal. If the Authority approves the access arrangement proposal, the access arrangement takes effect on either a date fixed in the final decision, or if no date is fixed, 10 business days after the date of the final decision.

If the Authority's final decision refuses to approve an access arrangement proposal (as submitted or as revised after the draft decision), the Authority must itself propose an access arrangement or revisions to the access arrangement under rule 64 of the NGR. The Authority's proposal for an access arrangement or revisions is to be formulated with regard to the following:

- matters that the applicable legislation requires an access arrangement to include;
- service provider's access arrangement proposal; and
- Authority's reasons for refusing to approve the access arrangement proposal.

The Authority's proposal for an access arrangement or revisions take effect on a date fixed in the determination or if no date is fixed, 10 business days after the Authority's decision.


Access Arrangement Decision-Making Process
Pre-submission conference (non-compulsory) (NGR 57)
Service provider lodges proposal (NGR 52)
Authority reviews proposal (NGR 58)
Service provider corrects proposal if required (NGR 58)
Authority publishes public consultation notice (NGR 58)
Authority receives submissions on proposal (NGR 58)
Authority's draft decision approves proposal (NGR 59)
Authority's draft decision does not approve proposal (NGR 59)
Authority publishes public consultation notice (NGR 59)
A hearing may be requested (NGR 61)
Service provider may submit revised proposal (NGR 60)
Authority receives submissions on proposal (NGR 59)
Authority's final decision approves initial or revised proposal (NGR 62)
Authority's final decision does not approve proposal (NGR 62)
Access arrangement starts (NGR 62)
Authority formulates its own access arrangement (NGR 64)
Access arrangement starts (NGR 64)
An affected party may apply to the tribunal for a review (NGL(WA)245)

Appendix 3 Content of an Access Arrangement

GGT is required to submit a "full access arrangement" for the GGP. Under section 2 of the NGL(WA), a "full access arrangement" is an access arrangement that:

- provides for price or revenue regulation as required by the NGR; and
- deals with all other matters for which the NGR require provisions to be made in an access arrangement.

The required content of a full access arrangement proposal is specified in rule 48 of the NGR.

> 48 Requirements for full access arrangement (and full access arrangement proposal)
>
> A full access arrangement must:
>
> a) identify the pipeline to which the access arrangement relates and include a reference to a website at which a description of the pipeline can be inspected; and
>
> b) describe the pipeline services the service provider proposes to offer to provide by means of the pipeline; and
>
> c) specify the reference services; and
>
> d) specify for each reference service:
>
> i) the reference tariff; and
>
> ii) the other terms and conditions on which the reference service will be provided; and
>
> e) if the access arrangement is to contain queuing requirements – set out the queuing requirements; and
>
> f) set out the capacity trading requirements; and
>
> g) set out the extension and expansion requirements; and
>
> h) state the terms and conditions for changing receipt and delivery points; and
>
> i) if there is to be a review submission date – state the review submission date and the review commencement date; and
>
> j) if there is to be an expiry date – state the expiry date.
>
> a) This rule extends to an access arrangement proposal consisting of a proposed full access arrangement.

As per rule 43 of the NGR, the service provider must submit access arrangement information when submitting a full access arrangement proposal. Rule 42 of the NGR states that access arrangement information is information that is reasonably necessary for users to understand the background to the access arrangement, and the basis and derivation of various elements of the access arrangement.

The required content of access arrangement information for a full access arrangement proposal is specified in rule 72 of the NGR.