Final Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024

Submitted by Goldfields Gas Transmission Pty Ltd

19 December 2019

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Summary of Required Amendments

Required Amendment 1

The values for total revenue (nominal) must reflect the values set out in Table 15 of this final decision.

Required Amendment 2

The operating expenditure must reflect the values in Table 24 of this final decision.

Required Amendment 3

The opening capital base must reflect the values in Table 40 of this final decision.

Required Amendment 4

The projected capital base must reflect the values in Table 61 of this final decision.

Required Amendment 5

Section 3.6 of the access arrangement must be amended to incorporate the values for the speculative capital expenditure account in Table 64 of this final decision.

Required Amendment 6

The return on the capital base must reflect the weighted average cost of capital parameters in Table 68 of this final decision.

Required Amendment 7

Depreciation must reflect the values in Table 73 of this final decision.

Required Amendment 8

The estimated cost of corporate income tax must reflect the values in Table 91 of this final decision.

Required Amendment 9

Schedule A of the access arrangement must be amended to reflect the tariffs set out in Table 98 of this final decision.

Required Amendment 10

The tariff variation formulas in Schedule A of the access arrangement (pages 47 and 48) must be amended to update the definition of inflation ("Z") to reflect the value of inflation used in this final decision (1.14 per cent).

Required Amendment 11

Sections 5.2(a) and 5.4(c) of the access arrangement must be amended to read:

- Section 5.2(a): "An access request for a Service not provided by Spare Capacity or Developable Capacity must be made in writing and must: …"
- Section 5.4(c): "An access request for any Service provided by Spare Capacity must be made in writing and must: …"

New sections (5.2(aa) and 5.4(ca)) must be inserted into the access arrangement after sections 5.2(a) and 5.4(c) respectively, and read: "The **access request date** is the date on which the Prospective User's access request is received by Service Provider."

Section 5.5.1(a) of the access arrangement must be amended to read: "Where all Expressions of Interest for Services to be provided by Spare Capacity can be met with the available Spare Capacity, Service Provider will treat each Expression of Interest as an

access request received on the date 30 Business Days after the date that the Spare Capacity Notice is published in a national daily newspaper (the date 30 Business Days after the date of publication of the Spare Capacity Notice being the **access request date**)."

Minor amendments to sections 5.3.2(a)(iv), 5.4(j); 5.5(a)(i), 5.5.1(b), 5.5.2(b), 5.5.4(b), 5.6.1(b)(i), 5.6.1(b)(ii), 5.6.1(c) and 5.6.1(d) of the access arrangement (as detailed in footnote 306 of this final decision) must be made to correct errors and make the access arrangement consistent with GGT's proposed revised amendments submitted in May 2019 (and detailed in Appendix 5 of this final decision).

Required Amendment 12

Minor amendments to sections 7.3(a) and 7.3(a)(iii) of the access arrangement (as detailed in footnote 314 of this final decision) must be made to make the access arrangement consistent with GGT's proposed revised amendments submitted in May 2019 (and detailed in Appendix 6 of this final decision).

Final Decision

Background

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

2. On 21 December 2018, Goldfields Gas Transmission Pty Ltd (GGT) submitted its proposed access arrangement revisions, access arrangement information and access arrangement supporting information for the Goldfields Gas Pipeline (GGP) to the ERA.[1] GGT's proposal covers the five-year period from 1 January 2020 to 31 December 2024 (referred to as the fourth access arrangement period or AA4).

3. The role of the ERA is to determine whether GGT's proposal complies with the requirements of the National Gas Law (NGL) and National Gas Rules (NGR) as implemented in Western Australia by the *National Gas Access (WA) Act 2009*.

4. As required by the NGR, the ERA invited submissions from interested parties on GGT's proposal by publishing an initiating notice on 22 January 2019.

5. On 1 March 2019, the ERA published an issues paper to assist interested parties to prepare submissions and understand some of the issues to be addressed by the ERA in determining whether to approve GGT's proposal.[2] Interested parties were invited to make their submissions by 27 March 2019. No submissions were received.

6. As a result of changes to the NGR occurring in March 2019, on 21 May 2019, the ERA requested GGT to provide additional information to clarify, substantiate and/or amend its proposal on certain matters. GGT submitted further amendments to its proposed access arrangement on 30 May 2019.

7. The ERA published its draft decision on 31 July 2019.[3] The decision did not approve GGT's proposal and detailed 13 required amendments. GGT was allowed until 11 September 2019 to submit a revised access arrangement proposal that addressed the draft decision requirements.

8. GGT's revised proposal was received on 11 September 2019, consisting of a proposed revised access arrangement, revised access arrangement information and other supporting information. The revised proposal was published on the ERA's website on 13 September 2019.

9. Interested parties had until 10 October 2019 to make submissions on the ERA's draft decision and GGT's revised proposal. No submissions were received.

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1 GGT, 21 December 2018, *Goldfields Gas Pipeline Revised Access Arrangement 1 January 2020*; GGT, 1 January 2019 (submitted 21 December 2018), *Proposed Revised Access Arrangement Information*; GGT, 1 January 2019 (submitted 21 December 2018), *Access Arrangement Revision Proposal Supporting Information*, 1 January 2019.

2 ERA, 1 March 2019, *Proposed revisions to the access arrangement for the Goldfields Gas Pipeline for 2020 to 2024 – Issues Paper*.

3 ERA, 31 July 2019, *Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*.

GGT's initial proposal

10. The GGP is a 1,378km transmission pipeline that receives natural gas from offshore fields in the north west of Western Australia. The receipt points of the GGP are located at Yarraloola, and the pipeline extends to Kalgoorlie in the Goldfields-Esperance region. The 47km Newman Lateral is also part of the GGP.

11. For the purposes of tariff regulation, the GGP comprises two notional pipelines, which are in reality the same physical pipeline. Only 54.5 per cent of the capacity of the GGP is classified as a scheme pipeline for the purposes of the access regulatory regime of the *National Gas Access (WA) Act 2009*. The GGP is required to have an access arrangement approved for this (fully regulated) capacity, which is the subject of this access arrangement review process. The remaining 45.5 per cent of capacity is classified as a non-scheme pipeline and must comply with the separate information disclosure and arbitration requirements set out in Part 23 of the NGR.

12. GGT proposed to increase reference tariffs by approximately 26 per cent in real terms from the average tariff applying during the period from 1 July 2016 to 31 December 2019.

13. GGT proposed:

- $95.9 million of forecast operating expenditure during AA4. GGT utilised the base-step-trend method to forecast its operating costs.[4]
- $16.1 million of forecast capital expenditure during AA4. Most of this proposed expenditure was for sustaining the GGP's capital assets.[5] Projects accounting for a large proportion of this proposed capital expenditure included:
  - a compressor station replacement program (24.5 per cent of proposed capital expenditure)
  - a site accommodation upgrade program (24.4 per cent of proposed capital expenditure)
  - a remote terminal unit replacement program (20.7 per cent of proposed capital expenditure)
  - a cathodic protection unit replacement program (7.7 per cent of proposed capital expenditure).

14. GGT's proposed rate of return was 5.56 per cent (nominal after tax).

ERA's draft decision

15. The ERA's draft decision was to not approve GGT's proposed revisions to the GGP access arrangement for 2020 to 2024. The reasons for not approving GGT's proposal were set out in the draft decision document.

16. GGT was required to make 13 amendments to the access arrangement before the ERA would approve it.

4 Real dollars at 31 December 2018.

5 Real dollars at 31 December 2018.

17. Under rule 59(3) of the NGR, the ERA was required to fix a period of at least 30 business days (known as the "revision period") within which GGT could, under rule 60(1), submit additions or other amendments to its proposal to address the matters raised in the ERA's draft decision. The ERA fixed the revision period at 30 business days from the date it published the draft decision. The revision period closed at 4.00 pm (WST) Wednesday, 11 September 2019.

18. Consistent with rule 59(5)(iii) of the NGR, the ERA invited submissions on its draft decision for a period of 20 business days following the revision period fixed for GGT. The submission period closed on Thursday, 10 October 2019.

GGT's response to the draft decision

19. GGT submitted a revised proposal within the revision period on 11 September 2019. The revised proposal consisted of a proposed revised access arrangement, revised access arrangement information and other supporting information.[6]

20. GGT accepted seven of the ERA's 13 draft decision required amendments. GGT stated that:[7]

> In addressing two of the amendments, GGT has proposed changes to the opening capital base at 1 January 2020, to depreciation and to forecast operating expenditure. These changes flow through [to] the remaining four amendments, which GGT has accepted "in principle".

21. Table 1 summarises GGT's response to each of the draft decision required amendments and provides a reference to where in this final decision the matter is considered.

Table 1: Summary of GGT's responses to the ERA's draft decision

ERA draft decision required amendment	GGT response to required amendment	Final decision reference
Pipeline and Reference Services ***Required Amendment 1*** *GGT must incorporate the changes to section 2 (Pipeline Services) of the access arrangement as detailed in Appendix 4 of the draft decision.*	GGT accepted the required amendment. The proposed changes (as detailed in Appendix 4 of the draft decision) were incorporated into section 2.1 of the proposed access arrangement.	Paragraph 83 to 84.
Revenue and Tariffs – Total Revenue ***Required Amendment 2*** *GGT must amend the total revenue*	GGT amended the total revenue requirement for AA4. The amended value of $235.2 million differs from the value in the draft decision because GGT:	Paragraph 143 to 145

6 GGT, 11 September 2019, *Goldfields Gas Pipeline Revised Access Arrangement 1 January 2020 Amended in response to ERA Draft Decision dated 31 July 2019*; GGT, 11 September 2019, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission*; GGT, 11 September 2019, *Proposed Revised Access Arrangement Information Amended in response to ERA Draft Decision dated 31 July 2019;* GGT, 11 September 2019, *Goldfields Gas Pipeline Access Arrangement revision: averaging periods for rate of return determination (confidential).*

7 GGT, 11 September 2019, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission*, p. 1.

ERA draft decision required amendment	GGT response to required amendment	Final decision reference
requirement for the access arrangement period to reflect the values set out in Table 8 of the draft decision.	• Amended individual operating expenditure forecast items (in addressing required amendment 3). • Amended the capital base during the period 2015 to 2019 (in addressing required amendment 5).	
Revenue and Tariffs – Operating expenditure ***Required Amendment 3*** *GGT must amend the values for operating expenditure to reflect the values set out in Table 14 of the draft decision.*	GGT amended the values for operating expenditure. The amended values differ from the values in the draft decision because GGT made further amendments to some individual forecast expenditure values.	Paragraph 265 to 308
Revenue and Tariffs – Opening capital base ***Required Amendment 4*** *GGT must amend the opening capital base at 1 January 2020 to reflect the values set out in Table 28 of the draft decision.*	GGT amended the value of the opening capital base at 1 January 2020. The amended value of $369 million (real) differs from the value in the draft decision because GGT: • Identified and corrected an error in the ERA's draft decision model, which affected the roll forward of the capital base from 1 January 2015. • Made some adjustments to past capital expenditure and depreciation amounts.	Paragraph 435 to 440
Revenue and Tariffs – Projected capital base ***Required Amendment 5*** *GGT must amend the projected capital base to reflect the values set out in Table 43 of the draft decision.*	GGT amended the values for the projected capital base. The amended values differ from the values in the draft decision because of the amendments made by GGT in addressing required amendment 4.	Paragraph 556 to 567
Revenue and Tariffs – Speculative capital expenditure ***Required Amendment 6*** *GGT must incorporate a speculative capital expenditure account into the access arrangement. The speculative capital expenditure account for AA3 will reflect the closing balance shown in Table 45 of the draft decision.*	GGT accepted the required amendment and incorporated a speculative capital expenditure account into the revised access arrangement (new section 3.6). The closing value of the account reflects the value in the draft decision.	Paragraph 581 to 585
Revenue and Tariffs – Return on the regulatory capital base ***Required Amendment 7*** *Subject to the nomination of a final averaging period, GGT must amend its*	GGT accepted the required amendment and nominated the final averaging period in a confidential letter to the ERA.	Paragraphs 649 to 651

ERA draft decision required amendment	GGT response to required amendment	Final decision reference
rate of return estimate to be 5.02 per cent (vanilla, nominal after-tax).		
Revenue and Tariffs – Depreciation ***Required Amendment 8*** *GGT must amend the forecast of depreciation for the fourth access arrangement period to reflect the values set out in Table 51 of the draft decision.*	GGT amended the forecast of depreciation. The amended values differ from the values in the draft decision because of the amendments made by GGT in addressing required amendment 4.	Paragraph 669 to 671
Revenue and Tariffs – Taxation ***Required Amendment 9*** *GGT must amend its calculation of income tax and tax depreciation methods as follows:* • *Amend the depreciation method to the diminishing value method for new assets from 1 January 2020.* • *Amend the estimated cost of corporate income tax in accordance with Table 58 of the draft decision.*	GGT accepted the required amendment to amend the depreciation method to the diminishing value method for new assets from 1 January 2020. GGT amended the estimated cost of corporate income tax. The amended values differ from the values in the draft decision because GGT has used different: • Tariff revenue (in response to required amendment 2). • Operating expenditure (in response to required amendment 3). • Debt raising costs (in response to required amendment 5).	Paragraph 734 to 748
Revenue and Tariffs – Reference tariffs ***Required Amendment 10*** *GGT must amend Schedule A of the access arrangement with the reference service tariffs in Table 61 of the draft decision.*	GGT amended Schedule A of the access arrangement. The amended reference service tariffs differ from the tariffs in the draft decision because GGT's total revenue amount for AA4 differs from the draft decision (in response to required amendment 2).	Paragraph 776 to 782
Revenue and Tariffs – Tariff variation mechanism ***Required Amendment 11*** *GGT must amend the tariff variation formulas in Schedule A of the access arrangement to update the definition of inflation ("Z") to reflect the value of inflation used in the draft decision, and ultimately the value used in the ERA's final decision. The 'limit on movement of the weighted average tariff basket' formula must delete the definition of "Y" because this component is not used in that formula. The X factor parameter must be revised to use the present*	GGT accepted the required amendment. The tariff variation formulas in Schedule A of the access arrangement were amended in accordance with required amendment 11.	Paragraph 795 to 796

ERA draft decision required amendment	GGT response to required amendment	Final decision reference
value of tariff revenue and tariffs that are calculated by the tariff model.		
Other Access Arrangement Provisions – Application procedures and queuing requirements ***Required Amendment 12*** *GGT must incorporate the proposed changes to section 5 (Queuing) of the access arrangement as detailed in Appendix 5 of the draft decision.*	GGT accepted the required amendment. The proposed changes (as detailed in Appendix 5 of the draft decision) were incorporated into section 5 of the revised access arrangement.	Paragraphs 865 to 870
Other Access Arrangement Provisions – Extension and expansion requirements ***Required Amendment 13*** *GGT must incorporate the proposed changes to section 7 (Extension and Expansion) of the access arrangement as detailed in Appendix 6 of the draft decision.*	GGT accepted the required amendment. The proposed changes (as detailed in Appendix 6 of the draft decision) were incorporated into section 7 of the revised access arrangement.	Paragraphs 897 to 898

Source: GGT, 11 September 2019, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission.*

ERA's final decision

22. The final decision is to not approve GGT's revised proposed revisions to the GGP access arrangement for 2020 to 2024. The reasons for not approving GGT's revised proposal are set out in this final decision.

23. The ERA has identified 12 required amendments to GGT's proposed revised access arrangement that are needed before it can be approved. The required amendments, listed on page 1 and 2 of this final decision, are also stated in the reasons for this final decision at the point where each part of the access arrangement is considered. The ERA's final decision complies with the NGL and NGR. In particular, the ERA has considered the national gas objective and revenue and pricing principles in making the final decision.

ERA's approved access arrangement

24. The NGR contain provisions for the ERA to make or revise an access arrangement proposal when the ERA's final decision is to refuse to approve a service provider's access arrangement proposal.

> **64 [ERA's] power to make or revise access arrangement on refusing to approve an access arrangement proposal**
>
> (1) If, in an access arrangement final decision, the [ERA] refuses to approve an access arrangement proposal (other than a variation proposal), the [ERA]

must itself propose an access arrangement or revisions to the access arrangement (as the case requires) for the relevant pipeline.

(2) The [ERA's] proposal for an access arrangement or revisions is to be formulated with regard to:

(a) the matters that the Law requires an access arrangement to include; and

(b) the service provider's access arrangement proposal; and

(c) the [ERA's] reasons for refusing to approve that proposal.

(3) The [ERA] may (but is not obliged to) consult on its proposal.

(4) The [ERA] must, within 2 months after the access arrangement final decision, make a decision giving effect to its proposal.

(5) When the [ERA] makes a decision under this rule, it must:

(a) give a copy of the decision to the service provider; and

(b) publish the decision on the [ERA's] website.

(6) The access arrangement or the revisions to which the decision relates takes effect on a date fixed in the determination or, if no date is so fixed, 10 business days after the date of the decision.

25. The ERA has not approved GGT's proposed revised access arrangement. Pursuant to rule 64(1) and 64(4) of the NGR, the ERA must now itself propose revisions to the access arrangement for the GGP, and make a decision to give effect to its proposal, within two months of this final decision.

26. In accordance with rule 64(2) of the NGR, the ERA has formed its proposed revisions to the access arrangement having regard to the requirements of the NGL, GGT's revised proposal and the ERA's reasons for refusing to approve it. The ERA has made the necessary revisions to GGT's proposed revised access arrangement, consistent with the required amendments in this final decision.

27. As provided for under rule 64(3) of the NGR, the ERA has decided not to consult on its proposed revised access arrangement. Interested parties were given opportunities to provide submissions on the ERA's draft decision and GGT's revised proposal in response to the ERA's draft decision. No submissions were received. The ERA's final decision does not raise any new matters for consideration. Given this, the ERA considers that there is no reason to consult on its proposed revised access arrangement, which implements the required amendments from the draft decision as set out in this final decision.

28. The ERA considers that for the purpose of rule 64(4), this final decision constitutes the decision that gives effect to its proposed revised access arrangement for the GGP.

29. Consistent with the requirements of rule 64(5) of the NGR, the ERA has published its decision and approved access arrangement on its website[8] and has provided GGT with a copy of each. The ERA has also drafted its own access arrangement information, which contains the information that is required to understand the background to, and the basis and derivation of the various elements of, the approved

[8] ERA, 'Goldfields Gas Pipeline – Access Arrangement Period 2020-2024' (online) [accessed December 2019].

access arrangement. The access arrangement information is also available on the ERA's website.[9]

30. In accordance with rule 64(6) of the NGR, the ERA has decided that its approved access arrangement for the GGP will take effect on 1 January 2020.

[9] ERA, 'Goldfields Gas Pipeline – Access Arrangement Period 2020-2024' (online) [accessed December 2019].

Reasons

Decision making framework

Regulatory framework

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

32. Under rule 100 of the NGR, all provisions of an access arrangement must be consistent with the national gas objective, which is specified in section 23 of the NGL.

> 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.

33. Sections 28(1) and (2) of the NGL specify the manner in which the ERA must perform or exercise its regulatory functions or powers.

> **28 Manner in which [ERA] must perform or exercise [ERA] economic regulatory functions or powers**
>
> (1) The [ERA] must, in performing or exercising an [ERA] economic regulatory function or power—
>
> (a) 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; and
>
> (b) …
>
> (2) In addition, the [ERA]—
>
> (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 [ERA] economic regulatory function or power, if the [ERA] considers it appropriate to do so.

34. As specified, the ERA must consider the revenue and pricing principles. These principles are set out in section 24 of the NGL.

> **24 Revenue and pricing principles**
>
> (1) The revenue and pricing principles are the principles set out in subsections (2) to (7).
>
> (2) A service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in—
>
> (a) providing reference services; and

(b) complying with a regulatory obligation or requirement or making a regulatory payment.

(3) A service provider should be provided with effective incentives in order to promote economic efficiency with respect to reference services the service provider provides. The economic efficiency that should be promoted includes—

(a) efficient investment in, or in connection with, a pipeline with which the service provider provides reference services; and

(b) the efficient provision of pipeline services; and

(c) the efficient use of the pipeline.

(4) Regard should be had to the capital base with respect to a pipeline adopted—

(a) in any previous—

(i) full access arrangement decision; or

(ii) decision of a relevant Regulator under section 2 of the Gas Code;

(b) in the Rules.

(5) A reference tariff should allow for a return commensurate with the regulatory and commercial risks involved in providing the reference service to which that tariff relates.

(6) Regard should be had to the economic costs and risks of the potential for under and over investment by a service provider in a pipeline with which the service provider provides pipeline services.

(7) Regard should be had to the economic costs and risks of the potential for under and over utilisation of a pipeline with which a service provider provides pipeline services.

Changes to the regulatory framework and transitional provisions

35. In March 2019, the Australian Energy Market Commission (AEMC) made a final determination to make changes to the regulatory framework for covered transmission and distribution natural gas pipelines in Australia.[10] The specific changes to the NGR are set out in *National Gas Amendment (Regulation of covered pipelines) Rule 2019 No.1*.[11] The new rules:[12]

- Set out a new process for determining which services will have reference tariffs set by the regulator. Reference tariffs are the prices that pipeline operators can charge their customers.
- Clarify how regulators calculate efficient costs so reference tariffs can be set at more efficient levels.
- Strengthen reporting obligations to support more balanced negotiations. Pipeline owners will be required to provide more relevant, timely and accessible information for pipeline users through the Natural Gas Bulletin Board or on the pipeline owners' websites.

[10] Australian Energy Market Commission, *Regulation of covered pipelines, Rule determination*, 14 March 2019 (online) (accessed May 2019).

[11] Australian Energy Market Commission, *National Gas Amendment (Regulation of covered pipelines) Rule 2019 No.1* (online) (accessed May 2019).

[12] Australian Energy Market Commission, 'Regulation of covered pipelines' (online) (accessed May 2019).

- Give stakeholders, including pipeline users, more input into regulators' decisions.
- Set a clear trigger for pipeline users to start arbitration if negotiations fail.

36. Most of the new rules commenced on 21 March 2019, including new transitional provisions. Transitional rule 62 (in schedule 1) of the NGR applies to the GGP, which provides for exemptions from new rules 46, 47A and 48 of the NGR. These rules introduce provisions for the submission of a "reference service proposal" to the ERA prior to the submission of an access arrangement proposal:[13]

> **62 Application of Amending Rule to transitional pipelines**
>
> (1) The application of the Amending Rule to the transitional pipelines is modified under this rule 62.
>
> (2) New rule 46, 47A and 48 do not apply to the transitional pipelines in respect of the access arrangement for the next access arrangement period.
>
> (3) Old rule 46 applies to the transitional pipelines in respect of the access arrangement for the next access arrangement period.
>
> (4) Modified rule 48 applies to the transitional pipelines in respect of the access arrangement for the next access arrangement period.
>
> (5) Modified rule 48 is:
>
> **"48 Requirements for full access arrangement (and full access arrangement proposal)**
>
> (1) 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 all of the pipeline services that the service provider can reasonably provide on the pipeline, which must be described having regard to the characteristics of different pipeline services, including those listed in subrule 47A(2) of the Amending Rule; and
>
> (c) from the pipeline services identified under subrule (b), specify the services the service provider proposes to specify as reference services having regard to the reference service factors including any supporting information required by the [ERA]; and
>
> (d) if the pipeline service provider has engaged with pipeline users and end users in identifying the reference services under subrule (c), describe any feedback received from those users about which pipeline services should be specified as reference services; and
>
> (e) specify for each reference service:
>
> (i) the reference tariff; and
>
> (ii) the other terms and conditions on which each reference service will be provided; and
>
> (f) if the access arrangement is to contain queuing requirements – set out the queuing requirements; and
>
> (g) set out the capacity trading requirements; and

[13] In the NGR a "reference service proposal" means the proposal submitted under rule 47A. The proposal allows for the separate assessment of reference services prior to the assessment of an access arrangement or revisions to an access arrangement. In the case of revisions, the proposal must be submitted no later than 12 months prior to the review submission date for the access arrangement.

(h) set out the extension and expansion requirements; and

(i) state the terms and conditions for changing receipt and delivery points; and

(j) if there is to be a review submission date – state the review submission date and the revision commencement date; and

(k) if there is to be an expiry date – state the expiry date.

(2) This rule extends to an access arrangement proposal consisting of a proposed full access arrangement."

37. Subrule 47A(2) of the Amending Rule states:

> A pipeline service is to be treated as distinct from another pipeline service having regard to the characteristics of different pipeline services, including:
>
> (a) the service type (for example, forward haul, backhaul, connection, park and loan);
>
> (b) the priority of the service relative to other pipeline services of the same type; and
>
> (c) the receipt and delivery points.

Content of an access arrangement

38. GGT is required to submit a "full access arrangement" for the GGP. Section 2 of the NGL specifies a full access arrangement to be an access arrangement that:

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

39. The required content of a full access arrangement proposal is specified in rule 48 of the NGR. As indicated, a modified version of rule 48 applies to the GGP access arrangement for this access arrangement review (see paragraph 36). Table 2 details the required (modified) content for the GGP access arrangement and indicates where the ERA has considered the content in this final decision.

Table 2: Required content for the GGP access arrangement pursuant to modified rule 48 of the NGR[14]

Modified National Gas Rule	Requirement	Final decision reference
48(1)(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.	Paragraph 42 to 60
48(1)(b)	Describe all of the pipeline services that the service provider can reasonably provide on the pipeline, which must be described having regard to the characteristics of different pipeline services, including those listed in subrule 47A(2) of the Amending Rule.	Paragraph 61 to 84

[14] As specified in transitional rule 62 (schedule 1) of the NGR.

Modified National Gas Rule	Requirement	Final decision reference
48(1)(c)	From the pipeline services identified under subrule (b), specify the services the service provider proposes to specify as reference services having regard to the reference service factors including any supporting information required by the [ERA].	Paragraph 61 to 84
48(1)(d)	If the pipeline service provider has engaged with pipeline users and end users in identifying the reference services under subrule (c), describe any feedback received from those users about which pipeline services should be specified as reference services.	Paragraph 61 to 84
48(1)(e)(i)	Specify for each reference service, the reference tariff.	Paragraph 757 to 782
48(1)(e)(ii)	Specify for each reference service, the other terms and conditions on which each reference service will be provided.	Paragraph 802 to 845
48(1)(f)	If the access arrangement is to contain queuing requirements, set out the queuing requirements.	Paragraph 846 to 870
48(1)(g)	Set out the capacity trading requirements.	Paragraph 871 to 878
48(1)(h)	Set out the extension and expansion requirements.	Paragraph 879 to 898
48(1)(i)	State the terms and conditions for changing receipt and delivery points.	Paragraph 899 to 905
48(1)(j)	If there is to be a review submission date – state the review submission date and the revision commencement date.	Paragraph 42 to 60
48(1)(k)	If there is to be an expiry date – state the expiry date.	There is no expiry date.

40. Rule 43(1) of the NGR requires GGT to submit "access arrangement information" with its proposal. Rule 42(1) of the NGR defines access arrangement information as "information that is reasonably necessary for users and prospective users to understand the background to the access arrangement, and the basis and derivation of various elements of the access arrangement".

41. The specific requirements for access arrangement information relevant to price and revenue regulation are set out in rule 72 of the NGR and are reproduced in Table 3.

Table 3: Requirements for access arrangement information relevant to price and revenue regulation

National Gas Rule	Requirements for Access Arrangement Information (AAI)
72(1)(a)	If the access arrangement period commences at the end of an earlier access arrangement, AAI must include: • Capital expenditure (by asset) and operating expenditure (by category) over the earlier access arrangement period.

National Gas Rule	Requirements for Access Arrangement Information (AAI)
	• Usage of the pipeline over the earlier access arrangement period showing: – For a distribution pipeline: minimum, maximum and average demand and customer numbers in total and by tariff class. – For a transmission pipeline: minimum, maximum and average demand for each receipt or delivery point and user numbers for each receipt or delivery point.
72(1)(b)	AAI must include information on how the capital base is arrived at, and if the access arrangement period commences at the end of an earlier access arrangement, a demonstration of how the capital base increased or diminished over the previous period.
72(1)(c)	AAI must include the projected capital base over the access arrangement period, including: • A forecast of conforming capital expenditure for the period and the basis for the forecast. • A forecast of depreciation for the period, including a demonstration of how the forecast is derived on the basis of the proposed deprecation method.
72(1)(d)	To the extent it is practicable to forecast capacity and utilisation over the access arrangement period, AAI must include a forecast of pipeline capacity and utilisation of pipeline capacity over the period and the basis on which the forecast has been derived.
72(1)(e)	AAI must include a forecast of operating expenditure over the access arrangement period and the basis on which the forecast has been derived.
72(1)(f)	[deleted]
72(1)(g)	AAI must include the allowed rate of return for each regulatory year of the access arrangement period.
72(1)(h)	AAI must include the estimated cost of corporate income tax, calculated in accordance with rule 87A, including the allowed imputation credits referred to in that rule.
72(1)(i)	If an incentive mechanism operated for the previous access arrangement period, the AAI must include the proposed carry over of increments/decrements for efficiency gains/losses, and a demonstration of how an allowance is to be made for any such increments or decrements.
72(1)(j)	AAI must include the proposed approach to setting tariffs including: • The suggested basis of reference tariffs, including the method used to allocate costs and a demonstration of the relationship between costs and tariffs. • A description of any pricing principles employed, but not otherwise disclosed.
72(1)(k)	AAI must include the service provider's rationale for any proposed reference tariff variation mechanism.
72(1)(l)	AAI must include the service provider's rationale for any proposed incentive mechanism.
72(1)(m)	AAI must include the total revenue to be derived from pipeline services for each regulatory year of the access arrangement period.

Key dates and identification of the pipeline

42. Modified rule 48(1)(a) of the NGR requires the GGP access arrangement to "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":[15]

> **48 Requirements for full access arrangement (and full access arrangement proposal)**
>
> (1) 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
>
> …

43. The NGR also require an access arrangement to contain a review submission date and a revision commencement date (rule 49(1)(a)):

> **49 Review submission, revision commencement and expiry dates**
>
> (1) A full access arrangement (other than a voluntary access arrangement):
>
> (a) must contain a review submission date and a revision commencement date; and
>
> (b) must not contain an expiry date.

44. Rule 3 of the NGR defines these dates to mean:

> ***review submission date*** means a date on or before which an access arrangement revision proposal is required to be submitted.
>
> ***revision commencement date for an applicable access arrangement*** means the date fixed in the access arrangement as the date on which revisions resulting from a review of an access arrangement are intended to take effect.

45. At the time GGT submitted its proposed revised access arrangement on 21 December 2018, the NGR specified a general rule for a review submission date and revision commencement date (old rule 50(1) of the NGR[16]):

> **50 Review of access arrangements**
>
> (1) As a general rule:
>
> (a) A review submission date will fall four years after the access arrangement took effect or the last revision commencement date.
>
> (b) A revision commencement date will fall five years after the access arrangement took effect or the last revision commencement date.

46. As outlined at paragraph 35, changes to the NGR occurred in March 2019 (and after GGT's access arrangement proposal submission to the ERA). These changes affected the provisions of rule 50 of the NGR. The changes removed the general rule for a review submission date and revision commencement date and introduced new

[15] Under transitional provisions, modified rule 48(1)(a), as set out in schedule 1 (rule 62) of the NGR, applies to the GGP access arrangement. This modified rule is the same as rule 48(1)(a) of the NGR.

[16] See Version 41 of the NGR.

rules for such dates as follows. These new rules apply to this access arrangement review:

> **50 Review of access arrangements**
>
> (1) A service provider, as part of an access arrangement proposal for a full access arrangement (other than a voluntary access arrangement), must propose a review submission date and a revision commencement date. The proposed revision commencement date must be not less than 12 months after the proposed review submission date.
>
> (2) The [ERA] must approve the dates proposed by the service provider under subrule (1) if it is satisfied that those dates are consistent with the national gas objective and the revenue and pricing principles and if the proposed revision commencement date is not less than 12 months after the proposed review submission date.
>
> (3) If the [ERA] does not approve the dates proposed by the service provider for the review submission date or the revision commencement date (as the case may be), because it considers those dates are not consistent with the national gas objective and the revenue and pricing principles, the [ERA] must fix an alternative review submission date or revision commencement date (as the case may be).

GGT's initial proposal

47. GGT is the pipeline operator and complying service provider for and on behalf of each of the pipeline owners, who include:

- Southern Cross Pipelines Australia Pty Limited
- Southern Cross Pipelines (NPL) Australia Pty Limited
- Alinta Energy GGT Pty Limited.

48. Section 1 of GGT's proposed revised access arrangement identified the pipeline to which the access arrangement relates as the GGP, which is:[17]

> The pipeline as defined in Pipeline Licence 24 issued under the *Petroleum Pipelines Act 1969 (WA)*, being the pipeline or pipeline system for the transmission of natural gas from the North-West of Western Australia into the inland Pilbara and Goldfields regions, together with all structures for protecting or supporting the pipeline or pipeline system and associated facilities for the compression of gas, the maintenance of the pipeline and the receipt and delivery of gas and all fittings, appurtenances, appliances, compressor stations, scraper stations, mainline valves, telemetry systems (including communication towers) works and buildings used in connection with the pipeline or pipeline system and includes the lateral pipeline to Newman.

49. A description of the GGP, including pipeline map, is available on the APA Group website.[18]

50. GGT proposed a five-year period for the fourth access arrangement period (AA4), with a review submission date of 1 January 2024 and revision commencement date of 1 January 2025.

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17 GGT, 21 December 2018, *Goldfields Gas Pipeline Revised Access Arrangement 1 January 2020*, p. 65.

18 APA, 'Goldfields Gas Pipeline' (online) (accessed October 2019).

Draft decision

51. The NGR require GGT to identify the pipeline to which the access arrangement relates and to reference a website where a description of the pipeline can be inspected. GGT satisfied these requirements in section 1 of the proposed revised access arrangement by:

- Identifying the GGP as the pipeline to which the access arrangement relates.
- Referring to the APA Group website as the website where a description of the pipeline can be inspected.

52. GGT's proposed review submission and revision commencement dates were also specified in section 1 of the proposed revised access arrangement:

- The proposed review submission date of *1 January 2024* was four years after the expected commencement date of the proposed revised access arrangement (being 1 January 2020).
- The proposed revision commencement date of *1 January 2025* was five years after the expected commencement date of the proposed revised access arrangement (being 1 January 2020).

53. As stated at paragraph 46, changes to the NGR occurred in March 2019. These changes affected the requirements for review and commencement dates. The general rule of a review submission date falling four years after the access arrangement took effect (or the last revision commencement date) and a revision commencement date falling five years after the access arrangement took effect (or the last revision commencement date) was deleted from the NGR. The new rules require:

- The service provider to propose a review submission date and a revision commencement date, with the revision commencement date being at least 12 months after the proposed review submission date (rule 50(1) of the NGR).
- The ERA to approve the dates proposed by the service provider under rule 50(1) if it is satisfied that those dates are consistent with the national gas objective and the revenue and pricing principles, and if the proposed revision commencement date is at least 12 months after the proposed review submission date (rule 50(2) of the NGR).

54. The national gas objective and revenue and pricing principles are set out in sections 23 and 24 of the NGL and reproduced at paragraphs 32 and 34 of this final decision.

55. Although GGT's proposed revision commencement and review submission dates were submitted prior to the March 2019 rule changes, the proposed dates met the requirements of (new) rule 50(1). GGT's proposed revision commencement date of 1 January 2025 was at least 12 months after the proposed review submission date of 1 January 2024.

56. GGT's proposed dates created a five-year access arrangement period for AA4. The ERA considered that a five-year period provided a balance between the need to review provisions of the access arrangement for the GGP and the cost of regulation. The ERA was also satisfied that GGT's proposed dates were consistent with the national gas objective and the revenue and pricing principles, as GGT would be provided with a reasonable opportunity to recover at least the efficient costs it

incurred to provide reference services and comply with regulatory obligations or requirements.

57. Pursuant to rule 50(2) of the NGR, the ERA approved GGT's proposed review submission date of 1 January 2024 and revision commencement date of 1 January 2025.

GGT's response to the draft decision

58. GGT did not make any further amendments to the proposed review submission date, revision commencement date and identification of the GGP in its revised proposal.[19]

Final decision

59. GGT has not proposed any further amendments to the review submission date or revision commencement date in its revised proposal. There were no submissions from interested parties on the proposed dates.

60. The ERA maintains the position in its draft decision that GGT's proposed review submission date of 1 January 2024 and revision commencement date of 1 January 2025 comply with the requirements of rule 50 of the NGR. The ERA is satisfied that GGT's proposed dates are consistent with the national gas objective and the revenue and pricing principles as GGT will be provided with a reasonable opportunity to recover at least the efficient costs it incurs in providing reference services and complying with regulatory obligations or requirements.

[19] GGT, 11 September 2019, *Goldfields Gas Pipeline Revised Access Arrangement 1 January 2020 Amended in response to ERA Draft Decision dated 31 July 2019*, p. 3, p. 72.

Pipeline and reference services

61. "Pipeline service" is defined in Part 1 (section 2) of the NGL:

> **Pipeline service means**
>
> (a) a service provided by means of a pipeline, including –
>
> (i) a haulage service (such as firm haulage, interruptible haulage, spot haulage and backhaul); and
>
> (ii) a service providing for, or facilitating, the interconnection of pipelines; and
>
> (b) a service ancillary to the provision of a service referred to in paragraph (a),
>
> but does not include the production, sale or purchase of natural gas or processable gas.

62. As outlined at paragraph 35, changes to the NGR occurred in March 2019. These changes affected the requirements for pipeline and reference services. Modified rules 48(1)(b), (c) and (d)[20] apply to the GGP access arrangement. The modified rules are as follows:

> (1) A full access arrangement must:
>
> …
>
> (b) describe all of the pipeline services that the service provider can reasonably provide on the pipeline, which must be described having regard to the characteristics of different pipeline services, including those listed in subrule 47A(2) of the Amending Rule; and
>
> (c) from the pipeline services identified under subrule (b), specify the services the service provider proposes to specify as reference services having regard to the reference service factors including any supporting information required by the [ERA]; and
>
> (d) if the service provider has engaged with pipeline users and end users in identifying the reference services under subrule (c), describe any feedback received from those users about which pipeline services should be specified as reference services; and
>
> …

63. Subrule 47A(2) of the Amending Rule states:

> A pipeline service is to be treated as distinct from another pipeline service having regard to the characteristics of different pipeline services, including:
>
> (a) the service type (for example, forward haul, backhaul, connection, park and loan);
>
> (b) the priority of the service relative to other pipeline services of the same type; and
>
> (c) the receipt and delivery points.

64. The reference service factors in modified rule 48(1)(c) are detailed in rule 47A(15) of the NGR:

[20] As set out in schedule 1 (rule 62) of the NGR.

47A(15) The reference service factors are:

(a) actual and forecast demand for the pipeline service and the number of prospective users of the service;

(b) the extent to which the pipeline service is substitutable with another pipeline service to be specified as a reference service;

(c) the feasibility of allocating costs to the pipeline service;

(d) the usefulness of specifying the pipeline service as a reference service in supporting access negotiations and dispute resolution for other pipeline services, such that:

(i) reference services serve as a point of reference from which pipeline services that are not reference services can be assessed by a user or prospective user for the purpose of negotiating access to those other pipeline services;

(ii) a reference tariff serves as a benchmark for the price of pipeline services that are not reference services; and

(iii) reference service terms and conditions serve as a benchmark for the terms and conditions of pipeline services that are not reference services;

(e) the likely regulatory cost for all parties (including the [ERA], users, prospective users and the service provider) in specifying the pipeline service as a reference service.

GGT's initial proposal

65. GGT submitted that the GGP could be used to provide the following pipeline services. As there are no gas receipt points downstream of delivery points and the GGP is not configured to provide a bi-directional service a backhaul service is not provided:[21]

- **Firm Transportation Service:** a service whereby the pipeline operator receives from a user, at the receipt point, on a day, a quantity of gas not exceeding the maximum daily quantity (MDQ) specified in the user's gas transportation agreement, and delivers to the user, at one or more delivery points, on that day, a quantity of gas not exceeding the user's MDQ, without interruption or curtailment, except in the specific and limited circumstances set out in the user's gas transportation agreement.
- **Park Service:** [a service for the] receipt and "parking" or storing of gas in the pipeline;
- **Loan Service:** [a service for the] loan of gas from the pipeline;
- **Interruptible Transportation Service:** [a service for the] receipt and delivery of gas at specified points, if scheduled, on an interruptible basis; and
- **In-pipe Trade Service:** [a service for the] receipt and delivery of gas to or from a notional point within the pipeline to facilitate trade of gas between users at specified locations.

66. GGT proposed to retain a single reference service – the "Firm Service" – for the fourth access arrangement period (AA4). The Firm Service is detailed in section 2.2 of the proposed revised access arrangement and is "a service on the covered pipeline for the receipt of gas at a receipt point, the transmission of gas to, and the delivery of

[21] GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, pp. iv and 11-12.

gas at, the agreed delivery point(s)".[22] Provision of the Firm Service is subject to there being sufficient spare capacity. The terms and conditions applying to the Firm Service are discussed elsewhere in this decision (see paragraph 804).

67. GGT also proposed to continue to offer non-reference services – the "Negotiated Service" – to any user or prospective user who has requirements that cannot be satisfied through the Firm Service. The Negotiated Service would be provided on terms and conditions negotiated between GGT and the user. An "Interruptible Service" would be one type of Negotiated Service.[23]

> **Interruptible Service** means the provision of gas pipeline services by [GGT], on a basis which in the sole discretion of [GGT] acting reasonably may be curtailed or interrupted from time to time.

68. An Interruptible Service would be offered in instances where the spare capacity of the GGP was insufficient to meet the user's requirements in their entirety with a Firm Service.[24] In instances where additional spare capacity then became available, the user would be required to contract for the spare capacity as a Firm Service (and reduce the amount of Interruptible Service accordingly).

Draft decision

69. GGT retained the existing Firm Service as the only reference service to be provided under the proposed revised access arrangement. GGT submitted that all the existing gas transportation agreements with users of the GGP were agreements for the provision of a Firm Service.[25]

70. The Firm Service is detailed in section 2.2 of the proposed revised access arrangement. GGT made several amendments to the drafting of this section to clarify aspects of the Firm Service. These amendments did not materially alter the nature of the Firm Service and were not inconsistent with the requirements of the NGR.

71. GGT proposed to continue to offer a Negotiated Service (which included an Interruptible Service) to users that had requirements which could not be satisfied through the Firm Service. The Negotiated Service would be offered as a non-reference service and would not be covered by the provisions of the access arrangement. In circumstances where there was insufficient spare capacity to meet a user's requirements in their entirety with a Firm Service, GGT would be required to offer an Interruptible Service under section 2.3(c) of the access arrangement.

72. The pipeline and reference services specified in the proposed revised access arrangement remained largely the same as the services detailed in the current (AA3) access arrangement. There were no submissions to the ERA seeking any amendments to the services specified in GGT's initial proposal.

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22 GGT, *Goldfields Gas Pipeline Revised Access Arrangement 1 January 2020*, p. 6.

23 GGT, *Goldfields Gas Pipeline Revised Access Arrangement 1 January 2020*, p. 127.

24 An Interruptible Service is available only to the extent that the Firm Service is not available.

25 GGT, *Access Arrangement Revision Proposal Supporting Information*, 1 January 2019, p. 12.

Changed requirements of the NGR for pipeline and reference services

73. As stated at paragraph 62, changes to the NGR occurred in March 2019. These changes affected the requirements for pipeline and reference services. Under modified rules 48(1)(b), (c) and (d):[26]

- GGT must describe all the pipeline services that it can reasonably provide on the pipeline.
- From the pipeline services identified, GGT must specify the services it proposes to specify as reference services having regard to the reference service factors.
- If GGT engaged with pipeline users and end users in identifying the reference services, GGT must describe any feedback received from those users about which pipeline services should be specified as reference services.

74. As the changes to the NGR occurred after GGT's initial submission to the ERA, the ERA asked for and allowed GGT to provide additional information to clarify, substantiate and/or amend its proposal to specify only one reference service in the access arrangement for AA4.

75. In response to the ERA's request, GGT advised that it held discussions with users of the GGP who would be affected by any changes to the access arrangement:[27]

> Prior to submitting the revision proposal, GGT held discussions with the two users of the GGP who would be affected by any changes to the GGP Access Arrangement. GGT explained that further changes to the National Gas Rules, dealing with a range of matters including services, were being considered by the COAG Energy Council, but these had not (at that time) been progressed to specific rule change proposals.

76. GGT also proposed further amendments to section 2.1 of the proposed revised access arrangement to provide descriptions of each of the pipeline services that it could reasonably provide on the GGP (these further amendments are detailed in Appendix 4 of this decision). The pipeline services that could reasonably be provided included those services that were detailed in GGT's supporting information submitted with its initial proposal, with the exception of expanded firm and interruptible park and loan services.

Assessment of GGT's further amendments to address rule changes

77. The pipeline services that GGT proposed to include (and describe) in the access arrangement included the:

- Firm Service
- Interruptible Service
- Firm Parking Service
- Firm Loan Service
- Interruptible Parking Service
- Interruptible Loan Service
- In-pipe Trade Service

[26] As set out in schedule 1 (rule 62) of the NGR.

[27] GGT, *'GGP Access Arrangement Revision: ERA Information Requests 2, 3, 4 and 5'* [email], 30 May 2019.

- Interconnection Service

78. GGT specified the Firm Service as the only reference service to be provided (this was consistent with GGT's initial December 2018 proposal to the ERA). The other pipeline services that can be provided are non-reference services and these services are offered as Negotiated Services.

79. GGT's further amendments met the requirements of modified rules 48(1)(b) and (c). GGT identified and described all the pipeline services that it could reasonably provide on the GGP and specified the service it proposed to offer as a reference service – the Firm Service. To specify the Firm Service as the only reference service, GGT had regard to the reference service factors:

- Actual and forecast demand for the Firm Service – GGT stated that all the current gas transportation agreements with users of the GGP were agreements for the provision of a Firm Service, and inquiries from prospective users were usually inquiries for access to a Firm Service.
- Other substitutable pipeline services – GGT considered all the pipeline services that could be offered by means of the GGP and did not identify any other pipeline service that was substitutable with the Firm Service.
- Allocation of costs to the Firm Service, including regulatory costs – GGT considered the allocation of costs to determine its revenue requirement for AA4 and reference tariffs to be charged.
- The usefulness of the Firm Service in supporting access negotiations for other pipeline services – GGT stated that users seeking access to the Firm Service could negotiate different terms and conditions on which the service was offered (and have in the past). In circumstances where there was insufficient capacity to meet a user's service request, an interruptible service was offered and could be negotiated.

80. The ERA considered that the purpose of modified rule 48(1)(d) was to demonstrate that the service provider consulted with users of the pipeline and properly considered any feedback when determining what reference services to offer under the access arrangement. GGT submitted that it held direct discussions with users of the GGP prior to submitting its proposal to the ERA in December 2018. Users and other interested parties were given a further opportunity to comment on GGT's proposal when it was published by the ERA and in response to the ERA's issues paper.[28] No submissions were made to the ERA. In the absence of any submissions, the ERA had no reason to consider that users had any concerns with GGT's proposal to offer a single reference service, being the Firm Service.

81. Subject to any submissions from interested parties in response to the draft decision on GGT's further (May 2019) proposed amendments, the ERA considered that GGT's amended proposal for pipeline and reference services was consistent with the national gas objective and met the (modified) requirements of the NGR.

Draft Decision Required Amendment 1

GGT must incorporate the proposed changes to section 2 (Pipeline Services) of the access arrangement as detailed in Appendix 4 of [the] draft decision. [Appendix 4 of this final decision]

[28] ERA, *Proposed revisions to the access arrangement for the Goldfields Gas Pipeline for 2020 to 2024: Issues Paper*, 1 March 2019.

GGT's Response to the draft decision

82. GGT accepted the ERA's draft decision required amendment 1 and incorporated the proposed changes, that were submitted to the ERA in May 2019, to section 2 of the access arrangement.

Final decision

83. GGT's revised proposal incorporates the proposed amendments that were submitted by GGT in May 2019 to address the changes to the NGR (GGT's proposed amendments are detailed in Appendix 4 of this decision). There were no submissions from interested parties on the amended pipeline and reference services.

84. The ERA maintains the position in its draft decision that GGT's revised proposal for pipeline and reference services is consistent with the national gas objective and meets the (modified) requirements of rules 48(1)(b), (c) and (d) of the NGR.

Demand forecasts

85. Rule 72 of the NGR contains requirements for access arrangement information relevant to demand forecasts, including:

> **72 Specific requirements for access arrangement information relevant to price and revenue regulation**
>
> (1) The access arrangement information for a full access arrangement proposal (other than an access arrangement variation proposal) must include the following:
>
> (a) if the access arrangement period commences at the end of an earlier access arrangement period:
>
> …
>
> (iii) usage of the pipeline over the earlier access arrangement period showing:
>
> (A) … for a transmission pipeline, minimum, maximum and average demand for each receipt or delivery point; and
>
> (B) … for a transmission pipeline, user numbers for each receipt or delivery point;
>
> …
>
> (d) to the extent it is practicable to forecast pipeline capacity and utilisation of pipeline capacity over the access arrangement period, a forecast of pipeline capacity and utilisation of pipeline capacity over that period and the basis on which the forecast has been derived; …

86. Rule 74 of the NGR contains specific requirements for the provision of forecasts and estimates:

> **74 Forecasts and estimates**
>
> (1) Information in the nature of a forecast or estimate must be supported by a statement of the basis of the forecast or estimate.
>
> (2) A forecast or estimate:
>
> (a) must be arrived at on a reasonable basis; and
>
> (b) must represent the best forecast or estimate possible in the circumstances.

GGT's initial proposal

87. GGT submitted that the end users of the GGP are primarily companies with mining and mineral processing operations in the Pilbara, Mid-West and Goldfields-Esperance regions of Western Australia, producing iron ore, gold and nickel for sale in international markets.[29]

88. GGT transports some gas for power generation in regional communities, and a small quantity is delivered into the Kalgoorlie distribution system for commercial and residential use in the city.[30] GGT considered the Kalgoorlie commercial and

[29] GGT, *GGP Access Arrangement Information 2020-2024*, p. 1.

[30] GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 12.

residential market as small and relatively static, after consulting with ATCO Gas Australia (owner and operator of the Kalgoorlie distribution system) and Alinta Energy (gas retailer in Kalgoorlie).[31]

89. Rule 72 of the NGR requires GGT to provide pipeline usage information for both the third (AA3) and fourth (AA4) access arrangement periods. Table 4 shows the actual and forecast reserved capacity and throughput of the pipeline during AA3 as provided in GGT's initial proposal. While the access arrangement notes the capacity of the covered portion of the GGP is approximately 109TJ/day, this is calculated at the end of the pipeline at Kalgoorlie. The covered portion of the pipeline can deliver more capacity than this based on the location of its users and other factors.[32]

Table 4: Minimum, maximum and average historic demand by category (TJ/day)

	2015 actual	2016 actual	2017 actual	2018 forecast	2019 forecast
Reserved capacity					
Minimum	102.32	97.49	98.51	98.51	110.28
Maximum	103.30	105.22	99.26	110.28	110.28
Average	102.79	102.59	98.88	102.07	110.28
Throughput					
Minimum	64.61	76.52	85.24	86.95	89.79
Maximum	73.32	90.02	93.02	96.22	89.79
Average	69.21	84.88	89.73	92.18	89.79

Source: GGT, Access Arrangement Information 2020-2024, 1 January 2019, Table 3, p. 8.

90. Table 5 shows the number of users, and user numbers at receipt points and delivery points over AA3 as provided in GGT's initial proposal. GGT provided aggregate information instead of the number of users for each receipt and delivery point to avoid disclosure of information pertaining to the operations of individual pipeline users.

Table 5: Number of receipt points, delivery points and users over AA3

	2015 actual	2016 actual	2017 actual	2018 forecast	2019 forecast
Receipt points	2	2	2	2	2
Delivery points	15	15	15	15	15
Users	10	10	9	9	9

Source: GGT, Access Arrangement Information 2020-2024, 1 January 2019, Table 4, p. 9.

[31] GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 13.

[32] Other factors include pressure at which gas is received into the pipeline, the heating value of the gas, gas temperature and roughness of the internal surface of the pipe.

91. GGT submitted that all the existing capacity of the GGP available for provision of the Firm Service would be fully used by users with no spare capacity available during AA4 for the following reasons:

- GGT expected that Australian production and export volumes of iron ore, gold and nickel ore would remain high over AA4.[33] In recent years, prices for nickel have fluctuated and this affected production volumes. However, GGT expected strong demand for nickel ore over AA4 for the manufacture of the nickel compounds used in lithium ion batteries and energy storage.[34]
- GGT did not expect the Kalgoorlie commercial and residential market to grow significantly during AA4 given the size of the market.[35]

92. GGT's capacity forecast for the AA4 period was based on the user capacities under existing transportation agreements with the joint venture participants (Alinta Energy GGT Pty Ltd, Southern Cross Pipelines Australia Pty Ltd and Southern Cross Pipelines (NPL) Australia Pty Ltd) and third-party users.[36]

93. GGT's throughput forecast over AA4 was based on two components: the actual capacity and throughput data of its existing users for the period between 2015 and 2017; and usage of new users. GGT made transportation arrangements with three new users at the time of preparing its initial proposal and assumed that these new users would use all their capacity each day during AA4.[37]

94. As noted above, GGT's initial proposal forecast that the pipeline capacity of the GGP would be fully contracted over AA4 and so there would be no spare capacity. Four prospective users expressed future interest in utilising the pipeline with the total capacity sought between 10 TJ/day and 18.5 TJ/day.[38] In each case, interest was conditional on a decision to proceed with a project that would use gas.[39] At the time of submitting GGT's initial proposal, these prospective users had insufficient commitment to advance the development of capacity as set out in section 5.3 of the access arrangement.[40] As a result, GGT did not include the indicative pipeline capacity among the prospective users in its demand forecast and cost of capacity development in its initial proposal.[41]

95. GGT's initial proposal forecast of covered pipeline capacity and throughput for the AA4 period are shown in Table 6.

33 GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, pp. iv-v.

34 GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 13.

35 GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 11, p. 13.

36 GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 15.

37 GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 15.

38 GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 14.

39 GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 14.

40 Section 5.3 of the access arrangement for the GGP refers to developable capacity. GGT placed a Development Capacity Notice in the West Australian and the Australian, advising that GGT may commence investigations into the development of pipeline capacity and sought registration of interest from prospective users of services, which might be provided using that capacity.

41 GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 13, p. 14.

Table 6: GGT's initial proposal forecast capacity and throughput over AA4 (TJ/day)

	2020	2021	2022	2023	2024
Average capacity	110.28	110.28	110.28	110.28	110.28
Maximum capacity	110.28	110.28	110.28	110.28	110.28
Average throughput	90.46	90.46	90.46	90.46	90.46

Source: GGT, Access Arrangement Information 2020-2024, 1 January 2019, Table 10, p. 15.

Draft decision

96. GGT's initial proposal complied with the requirement of rule 72(1)(a)(iii) of the NGR to provide AA3 pipeline usage information.

97. The ERA assessed GGT's demand forecast for the Firm Service over AA4 and noted the following:

- GGT did not forecast any demand growth during AA4 because it expected that the contracted capacity and throughput would remain consistent with its existing gas transportation agreements. GGT assumed that all the pipeline's existing available capacity for provision of the Firm Service would be contracted to end users during AA4.[42]
- GGT expected that strong demand for nickel, gold and iron ore would maintain the increase of gas demand to full capacity for end users during AA4.

98. While GGT's AA4 forecast of gas demand for the GGP was for the pipeline to be at full capacity, the ERA assessed the reasonableness of GGT's forecast pursuant to rule 74 of the NGR.

99. Nickel and gold mining operations account for more than 80 per cent of the capacity and throughput of the covered portion of the GGP, with the remaining share of capacity being iron ore mining and power generation. For this reason, the ERA's assessment of the reasonableness of the GGT's forecast took into consideration the demand for nickel and gold.

100. The ERA assessed Australian and international demand forecasts for nickel, gold and iron ore over the access arrangement period (2020 to 2024), including information sourced from the commodity market publications of the World Bank, the Western Australian State Budget 2019/20 and the commodity reviews from the Western Australian Department of Mines, Industry Regulation and Safety.

101. In an October 2018 publication, the World Bank expected demand for nickel for batteries and electric vehicles to grow strongly in coming years.[43] The World Bank's nickel price forecast, which showed a steady price increase from US$13,681/tonne in 2019 to around US$15,890/tonne in 2025, appeared to reflect a strong demand for

42 GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 13.

43 The World Bank, *Commodity Markets Outlook: The Changing of the Guard: Shifts in Commodity Demand October 2018*, p. 36.

nickel.[44] In the 2019/20 State Budget, royalty income from nickel was forecast to increase from around AU$77 million in 2019/20 to around AU$88 million in 2022/23.[45]

102. Gold sales volumes for Western Australia increased for the third consecutive year to reach a record 212 tonnes in 2017/18.[46] According to the 2019/20 State Budget, the volume of merchandise exports was forecast to grow by 4 per cent in 2019/20, partly due to gold and lithium production increases in Western Australia.[47]

103. The World Bank stated that uncertainty remained on iron ore price forecasts, which were subject to the effect of China's environmental policies on its iron ore imports.[48] The World Bank expected the price of iron ore to decline moderately from US$65 per dry metric tonne in 2019 to around US$62 per dry metric tonne in 2025.[49]

104. The Western Australian Treasury forecast business investment in the State to return to growth of around 6 per cent in 2019/20, and expected investment supported by iron ore projects to grow at a relatively moderate level for the next few years.[50] The collapse of a tailings dam at a Vale iron ore mine in Brazil affected the mine's production capacity and resulted in higher iron ore prices in early 2019. However, Treasury forecast that this increase would be relatively short-lived. Treasury forecast the iron price to decrease from around US$73.5 per tonne in 2019/20 to around US$64 per tonne by 2022/23.[51]

105. GGT's initial proposal demand forecast for AA4 was broadly consistent with the ERA assessment of commodity prices and demand for nickel, gold and iron ore. Although prices for nickel and production volumes have fluctuated in recent years, GGT expected a stronger demand for nickel and gold production during AA4.[52]

106. GGT expected demand from the Kalgoorlie commercial and residential market to remain stable during AA4.[53] GGT did not include these relatively small requirements for pipeline capacity in its initial proposal demand forecast given the absence of firm commitments from prospective users as stated at paragraph 94.[54]

107. GGT's initial proposed reference tariff was based on its capacity and throughput forecast under existing gas transportation agreements with the GGT joint venture

44 The World Bank, *Commodity Markets Outlook: The Changing of the Guard: Shifts in Commodity Demand October 2018*, Appendix A, p. 44.

45 Department of Treasury Western Australia, *Western Australia State Budget 2019-20, Budget Paper No.3 Economic and Fiscal Outlook*, p. 85.

46 Department of Mines, Industry Regulation and Safety, *Western Australian Mineral and Petroleum Statistics Digest 2017-18*, p. 30.

47 Department of Treasury Western Australia, *Western Australia State Budget 2019-20, Budget Paper No.3 Economic and Fiscal Outlook*, p. 12.

48 The World Bank, *Commodity Markets Outlook: The Changing of the Guard: Shifts in Commodity Demand October 2018*, p. 36.

49 The World Bank, *Commodity Markets Outlook: The Changing of the Guard: Shifts in Commodity Demand October 2018*, Appendix A, p. 44.

50 Department of Treasury Western Australia, *Western Australia State Budget 2019-20, Budget Paper No.3 Economic and Fiscal Outlook*, p. 11.

51 Department of Treasury Western Australia, *Western Australia State Budget 2019-20, Budget Paper No.3 Economic and Fiscal Outlook*, p. 2.

52 GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 13.

53 GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 13.

54 GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 14.

participants and third-party users.[55] Given the expected increase in demand for mining operations during AA4, GGT forecast the contracted capacity of the GGP to increase from 99.26 TJ/d in 2017 to 110.28 TJ/d in 2018. GGT's initial proposal expected the same level of capacity to continue during AA4.[56] Likewise, GGT expected the throughput to increase from an average of around 85.16 TJ/d during AA3 to 90.46 TJ/d in 2020 and remain at the same level of average throughput during AA4.

108. Based on the considerations above, the ERA determined in its draft decision that GGT's forecast demand for capacity and throughput over AA4 was arrived at on a reasonable basis as required under rule 74(2)(a) of the NGR.

GGT's response to the draft decision

109. GGT did not make any further amendments to the demand forecasts in its revised proposal.

Final decision

110. Rule 72 of the NGR requires GGT to provide pipeline usage information for both the AA3 and AA4 access arrangement periods. The ERA requested updated information from GGT. GGT provided actual 2018 capacity and throughput data and a revised forecast for 2019 based on actual gas demand to 31 October 2019. Table 7 shows the updated minimum, maximum and average reserved capacity and gas throughput over AA3.

Table 7: Minimum, maximum and average demand by category over AA3 (TJ/d)

	2015 actual	2016 actual	2017 actual	2018 actual	2019 forecast
Reserved capacity					
Minimum	102.32	97.49	98.51	100.68	107.28
Maximum	103.30	105.22	99.26	102.78	110.53
Average	102.79	102.59	98.88	102.2	110.26
Throughput					
Minimum	62.13	73.31	84.05	85.74	88.25
Maximum	68.59	91.04	92.53	93.06	96.67
Average	65.69	84.07	89.47	90.17	92.97

Source: GGT, *Access Arrangement Information 2020-2024,* 1 January 2019, Table 3, p. 8. GGT, *28 November 2019,* Response to information request 10.

111. Table 8 shows the number of users, and user numbers at receipt points and delivery points over AA3. GGT provided this information in response to an ERA information request to confirm that the information in GGT's initial proposal has not changed. GGT noted that the only change was the number of delivery points had increased

[55] GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 15.

[56] GGT, *Access Arrangement Information 2020-2024*, 1 January 2019, Table 3, p. 8 and Table 10, p. 15.

from 15 to 16 in 2019. GGT provided aggregate information instead of the number of users for each receipt and delivery point to avoid disclosure of information pertaining to the operations of individual pipeline users.

Table 8: Number of receipt points, delivery points and users over AA3

	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Forecast
Receipt points	2	2	2	2	2
Delivery points	15	15	15	15	16
Users	10	10	9	9	9

Source: GGT, 29 November 2019, *Response to ERA information request 12.*

112. GGT did not revise its AA4 demand forecast in response to the ERA's draft decision. GGT provided information to the ERA following an information request submitting that its current contracted capacity had increased by 0.25 TJ/d. The reason for the change in capacity was that one customer had contracted capacity for 0.25 TJ/d more than previously identified by GGT. GGT did not propose amending the capacity forecast or throughput forecast at this late stage unless the ERA thought this to be necessary. The ERA considers that using this more recent information would provide the best forecast of demand over AA4. As the customer had a load factor of one, the ERA considers that the forecast of GGT's throughput should also be increased by 0.25 TJ/d. GGT's forecast indicates the pipeline will be at full capacity over the access arrangement period (see Table 9).

Table 9: GGT's updated forecast capacity and throughput for AA4 (TJ/day)

	2020	2021	2022	2023	2024
Average capacity	110.53	110.53	110.53	110.53	110.53
Maximum capacity	110.53	110.53	110.53	110.53	110.53
Average throughput	90.71	90.71	90.71	90.71	90.71

Source GGT, Access Arrangement Information 2020-2024, 1 January 2019, Table 10, p. 15.

113. The ERA considers that GGT's forecast gas usage is consistent with the production levels of nickel, gold and iron ore of the major users of the covered pipeline. The major users account for 80 per cent of gas usage of the covered pipeline.

114. In the draft decision, the ERA determined that GGT's AA4 demand forecast was arrived at on a reasonable basis as required under rule 74(2)(a) of the NGR. In making this determination, the ERA considered the following:

- GGT did not forecast any demand growth during AA4 because GGT expected that the contracted capacity and throughput would remain consistent with its existing gas transportation agreements. GGT assumed that all the pipeline's existing available capacity for the Firm Service will be contracted to end users during AA4.[57]

[57] GGT, *Access Arrangement Revision Proposal Supporting Information (Public)*, 1 January 2019, p. 13.

- GGT expected that strong demand for nickel, gold and iron ore will maintain the increase in gas demand to full capacity for end users during AA4.

115. The ERA's draft decision considerations included a review of:

- The drivers of gas demand for the pipeline. This included an assessment of gold and nickel operations, which account for 80 per cent of the demand for the pipeline. The ERA also assessed residential and commercial usage, which makes up the remaining 20 per cent of demand for the pipeline.
- Australian and international demand forecasts for nickel, gold and iron ore over the access arrangement period. This included information sourced from the World Bank, the Western Australia State Budget 2019/20 and commodity reviews from the Western Australian Department of Mines, Industry Regulation and Safety.

116. For this final decision, the ERA has reviewed updated information on nickel, gold and iron ore commodity forecasts, including additional information from quarterly forecasts from the Office of the Chief Economist at the Department of Industry (the Resources Quarterly).[58] This information confirms GGT's view that strong demand for nickel, gold and iron ore is likely to maintain the increase of gas demand to full capacity for end users during AA4.

117. The ERA considers that it is important to consider the relationship between gold, nickel and iron ore production and gas usage given that GGT's major customers, who together account for 80 per cent of covered pipeline usage, are gold, nickel and iron ore producers.

118. The Resources Quarterly publication stated that there were several nickel development projects under way that were expected to support Australia's nickel production reaching 207,000 tonnes in 2020/21.[59] [60]

119. According to Resources Quarterly, gold mine production is expected to increase by 4.8 per cent in 2019/20 and a further 2.2 per cent in 2020/21.[61] The Australian gold industry is experiencing a production resurgence, fuelled by sustained record Australian gold prices. Some Australian gold producers have decided to re-open gold mines previously on care and maintenance, or which were on suspended production when prices were lower.[62]

120. According to Resources Quarterly, the steel outlook remains connected to global industrial production, and the downside risks are decreasing in the outlook.[63] Higher volumes of iron ore production are expected to be supported by Fortescue's Iron

58 Australian Government Department of Industry, Innovation and Science, *Resources Energy Quarterly,* September 2019.

59 Australian Government Department of Industry, Innovation and Science, *Resources Energy Quarterly, September 2019*.

60 Australian Government Department of Industry, Innovation and Science, *Resources Energy Quarterly,* September 2019, p. 105.

61 Australian Government Department of Industry, Innovation and Science, *Resources Energy Quarterly,* September 2019, p. 85.

62 Australian Government Department of Industry, Innovation and Science, *Resources Energy Quarterly,* September 2019, p. 85.

63 Australian Government Department of Industry, Innovation and Science, *Resources Energy Quarterly,* September 2019 p. 30.

Bridge project, and by the development of three large iron ore projects in the Pilbara region.[64]

121. GGT expects demand from the Kalgoorlie commercial and residential market to remain stable during AA4. In addition, GGT has not included relatively small requirements for pipeline capacity into its demand forecast given the absence of firm commitments from prospective users.

Conclusion

122. Consistent with the draft decision, GGT's demand forecast for AA4 is supported by outlooks for commodity production and demand for nickel, gold and iron ore. While production volumes have fluctuated in recent years, GGT expects a stronger demand for nickel and gold production during AA4.

123. GGT's proposed reference tariff is based on its capacity and throughput forecast under existing gas transportation agreements with the GGT joint venture participants and third-party users. Given the expected increase in demand for mining operations during AA4, GGT submitted that the contracted capacity of the GGP will increase from 102.20 TJ/d in 2018 to 110.26 TJ/d in 2019 and subsequently to 110.53 TJ/d capacity during AA4 based on a revised capacity forecast. The ERA has revised GGT's forecast throughput by increasing it by 0.25TJ/day and concludes that the average throughput will increase from an average of 84.47 TJ/d during AA3 to 90.71 TJ/d in 2020 and remain at the same level during AA4.

124. The ERA considers that GGT's AA4 forecast demand for capacity and throughput, with an adjustment of 0.25 TJ/d as provided by GGT, has been arrived at on a reasonable basis and represents the best forecast as required under rule 74(2) of the NGR. Given the commodity outlooks and the relationship between commodity production and gas usage, the covered pipeline will be operating at full capacity for the AA4 regulatory period.

[64] Australian Government Department of Industry, Innovation and Science, *Resources Energy Quarterly* September 2019 p. 33.

Key performance indicators

125. At the time GGT submitted its proposed access arrangement revisions, the NGR required access arrangement information to include information on the key performance indicators to be used by the service provider to support the expenditure to be incurred over the access arrangement period (old rule 72(1)(f) of the NGR[65]).

126. As outlined at paragraph 35, changes to the NGR occurred in March 2019 and after GGT's initial access arrangement proposal submission to the ERA. These changes removed the requirement for access arrangement information to include key performance indicators.[66]

GGT's initial proposal

127. GGT's initial proposal for its key performance indicators was set out in part 7 of GGT's initial access arrangement information and included unit operating costs of capacity reservation and throughput, expressed in dollars per gigajoule ($/GJ) and dollars per terajoule per kilometre ($/TJ km).[67]

128. GGT stated that the unit operating costs expressed in $/GJ did not recognise that the pipeline's outlets were distributed over 78 per cent of its length.[68]

Draft decision

129. GGT's access arrangement information included the key performance indicators it used to support the expenditure it proposed for the fourth access arrangement period (AA4). The ERA considered separately the expenditure GGT initially proposed to be incurred over the access arrangement period.

130. As stated at paragraph 126, changes to the NGR occurred in March 2019. These changes removed the requirement for access arrangement information to include information on key performance indicators. The draft decision stated that while the requirement to include information on key performance indicators was removed by the changes to the NGR, service providers may still wish to include such information to support and substantiate their access arrangement proposals. For example, key performance indicators may be used to monitor the effects of expenditure over an access arrangement period and for benchmarking against other service providers.[69]

131. The proposed indicators were not directly comparable with other regulated Australian gas transmission pipelines.[70] To be comparable with indicators in access arrangements for other gas transmission pipelines, GGT would need an expenditure

65 See Version 41 of the NGR.

66 Rule 72(1)(f) was deleted from the NGR.

67 GGT, 1 January 2019, *Goldfields Gas Pipeline Proposed Revised Access Arrangement Information,* p. 18.

68 GGT, 1 January 2019, *Goldfields Gas Pipeline Proposed Revised Access Arrangement Information,* p. 18.

69 ERA, 31 July 2019, *Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024,*

70 Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement*, July 2019, p. 18.

indicator showing operating expenditure per kilometre ($/km), and/or operating expenditure per millimetre-kilometre ($/mmkm).[71] [72]

132. The ERA calculated an operating expenditure per kilometre indicator for the GGP using the information provided by GGT in its access arrangement proposal (Table 10). A direct and simple comparison of this indicator with other transmission pipelines for benchmarking purposes would be limited, however, given the differences between the GGP and other transmission pipelines including, for example, pipeline configuration, compression and operating conditions. Such differences would need to be considered if the results were to be used to assess the efficiency of the pipeline.

Table 10: Draft Decision operating expenditure (opex) key performance indicator

	2020	2021	2022	2023	2024
Forecast opex ($ million 2018)	18.893	18.945	19.147	19.341	19.553
GGP kilometres	1,378	1,378	1,378	1,378	1,378
Opex per kilometre of pipeline ($ 2018)	**13,710**	**13,748**	**13,895**	**14,036**	**14,189**

Source: GGT, Access Arrangement Supporting Information – Attachment 4 (OPEX model); APA website.

GGT's response to the draft decision

133. GGT's revised proposal included the same key performance indicators as GGT's initial proposal. The indicators were substantially the same and include unit operating costs of capacity reservation and throughput, expressed in dollars per gigajoule ($/GJ) and dollars per terajoule per kilometre ($/TJ km).[73]

Final decision

134. The requirement to include key performance indicators has been removed from the NGR. However, GGT decided to include the same key performance indicators as in its initial proposal. The indicators remain unchanged, except for the indicators being expressed in December 2018 dollars (rather than September 2018 dollars).

135. As stated in the draft decision, GGT's key performance indicators are not directly comparable with other regulated Australian gas transmission pipelines. An expenditure indicator showing operating expenditure per kilometre ($/km), and/or operating expenditure per millimetre-kilometre ($/mmkm) would allow some basic comparisons with transmission pipelines in Victoria, Queensland and the Northern Territory.

136. While there is no longer a requirement in the NGR for access arrangement information to include key performance indicators, the ERA has calculated for the purposes of this decision an updated operating expenditure per kilometre indicator for each year of AA4 (Table 11). The calculation is based on the information provided by GGT in its revised proposal and the ERA's final decision considerations on

[71] For example, APA Victorian Transmission System (Victoria), Roma to Brisbane Pipeline (Queensland) and Amadeus Gas Pipeline (Northern Territory).

[72] mmkm = Pipeline diameter (mm) multiplied by pipeline length (km).

[73] GGT, 11 September 2019, *Goldfields Gas Pipeline Proposed Revised Access Arrangement Amended in response to ERA Draft Decision dated 31 July 2019*, p. 18.

forecast operating expenditure, which is discussed elsewhere in this final decision (see paragraphs 265 to 308).

Table 11: Final decision operating expenditure key performance indicator

	2020	2021	2022	2023	2024
Forecast opex ($ million 2018)	16.747	16.715	16.958	16.530	16.885
GGP kilometres	1,378	1,378	1,378	1,378	1,378
Opex per kilometre of pipeline ($ 2018)	**12,153**	**12,130**	**12,306**	**11,996**	**12,254**

Source: ERA analysis.

Revenue and tariffs

Total revenue

137. Rule 76 of the NGR requires total revenue to be determined for each year of the access arrangement period using the building block approach.

> **76 Total revenue**
>
> Total revenue is to be determined for each regulatory year of the access arrangement period using the building block approach in which the building blocks are:
>
> (a) a return on the projected capital base for the year (See Divisions 4 and 5); and
>
> (b) depreciation on the projected capital base for the year (See Division 6); and
>
> (c) the estimated cost of corporate income tax for the year (See Division 5A); and
>
> (d) increments or decrements for the year resulting from the operation of an incentive mechanism to encourage gains in efficiency (See Division 9); and
>
> (e) a forecast of operating expenditure for the year (See Division 7).

GGT's initial proposal

138. GGT applied the building block approach to propose a total revenue requirement for AA4 of $249 million. Table 12 details GGT's proposed building block components, each of which were considered by the ERA in the draft decision.

Table 12: GGT's proposed total revenue requirement for AA4 ($ million nominal)

	2020	2021	2022	2023	2024	Total
Return on equity	11.045	11.130	11.043	10.931	10.797	54.946
Return on debt	10.131	10.209	10.130	10.027	9.904	50.400
Depreciation	4.453	5.548	6.043	6.473	5.770	28.288
Operating expenditure	19.606	20.028	20.619	21.219	21.852	103.324
Cost of tax	5.261	5.053	4.964	4.793	4.803	24.875
Value of imputation credits	-2.631	-2.527	-2.482	-2.396	-2.402	-12.437
Total revenue	**47.865**	**49.441**	**50.317**	**51.046**	**50.725**	**249.395**

Source: GGT, 1 January 2019, Proposed Revised Access Arrangement Information, p. 28, Table 16.

Draft decision

139. The ERA explained its determination of the forecast value of each of the building blocks in the draft decision. The total revenue requirement resulting from the ERA's draft decision is set out in Table 13. The ERA required GGT to amend the total revenue requirement for the AA4 period to reflect these values.

Draft Decision Required Amendment 2

GGT must amend the total revenue requirement for the fourth access arrangement period to reflect the values set out in Table 8 of [the] draft decision. [Table 13 of this final decision]

Table 13: ERA's draft decision total revenue requirement for AA4 ($ million nominal)

	2020	2021	2022	2023	2024	Total
Return on capital base	18.452	18.316	18.010	17.672	17.311	89.761
Regulatory depreciation	6.010	7.135	7.396	7.654	6.841	35.035
Depreciation	*10.715*	*11.805*	*11.988*	*12.160*	*11.254*	*57.923*
Inflationary gain	*-4.705*	*-4.670*	*-4.592*	*-4.506*	*-4.414*	*-22.887*
Operating expenditure	17.243	17.433	17.910	17.691	18.298	88.575
Regulatory corporate income tax	2.323	2.459	2.477	2.553	2.599	12.411
Corporate income tax	*4.646*	*4.919*	*4.955*	*5.106*	*5.197*	*24.823*
Imputation credits	*-2.323*	*-2.459*	*-2.477*	*-2.553*	*-2.599*	*-12.411*
Total revenue	**44.029**	**45.344**	**45.793**	**45.570**	**45.048**	**225.783**

Source: ERA, July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, Appendix 7, GGP Tariff Model. Some numbers may not add due to rounding.

GGT's response to the draft decision

140. In its revised proposal, GGT proposed that its total revenue requirement for AA4 be as shown in Table 14.

Table 14: GGT's revised total revenue requirement for AA4 ($ million nominal)

	2020	2021	2022	2023	2024	Total
Return on capital base	18.765	18.622	18.307	17.960	17.589	91.242
Regulatory depreciation	6.147	7.305	7.578	7.840	6.994	35.864
Operating expenditure	18.685	18.897	19.399	19.197	19.833	96.011
Corporate income tax	4.707	4.938	4.947	5.076	5.143	24.810
Value of imputation credits	-2.353	-2.469	-2.473	-2.538	-2.572	-12.405
Total revenue	**45.949**	**47.292**	**47.757**	**47.535**	**46.988**	**235.522**

Source: GGT, 11 September 2019, Access Arrangement Revision Proposal Response to ERA Draft Decision, p. 2, Table 1.

141. GGT's revised total revenue requirement differed from the ERA's draft decision total revenue requirement. GGT submitted that the differences resulted from the way in which GGT addressed draft decision required amendments 3 and 5.[74]

- [Draft Decision] Required Amendment 3: GGT has amended the individually forecast items of operating expenditure.
- [Draft Decision] Required Amendment 5: GGT has amended the capital base during the period 2015 to 2019, and the amendments flow through to the projected capital base for the period 2020 to 2024, resulting in a different return on the capital base, and different regulatory depreciation.

142. GGT further submitted that:[75]

> The estimates of corporate income tax, and valuation of imputation credits, are different from those in Draft Decision Table 8 because GGT amended the total revenue for the period 2020 to 2024 (and not because GGT used methods and parameters different from those used by the ERA). This is noted in GGT's response to [Draft Decision] Required Amendment 9.

Final decision

143. The ERA has separately considered the forecast value of each of the building blocks that make up the total revenue requirement in the subsequent sections of this final decision. The total revenue requirement resulting from the ERA's considerations is set out in Table 15.

Table 15: ERA final decision total revenue requirement for AA4 ($ million nominal)

	2020	2021	2022	2023	2024	Total
Return on capital base	15.424	15.287	15.010	14.708	14.388	**74.818**
Operating expenditure	17.131	17.294	17.744	17.494	18.074	**87.736**
Regulatory depreciation						
Depreciation	11.002	12.107	12.285	12.444	11.487	**59.325**
Inflationary gain	(4.300)	(4.262)	(4.185)	(4.101)	(4.011)	**(20.859)**
Regulatory corporate income tax						
Corporate income tax	4.431	4.804	4.990	5.052	4.892	**24.169**
Imputation credits	(2.216)	(2.402)	(2.495)	(2.526)	(2.446)	**(12.085)**
Total revenue	**41.472**	**42.828**	**43.350**	**43.071**	**42.383**	**213.104**

Source: ERA, Final Decision Tariff Model, December 2019. Some numbers may not add due to rounding.

144. When GGT has calculated the components of total revenue (discussed in the subsequent sections of this final decision) in real December 2018 dollars or nominal dollars, this has been done based on GGT's forecast of inflation (1.87 per cent) from

[74] GGT, 11 September 2019, *Access Arrangement Revision Proposal Response to ERA Draft Decision*, p. 2.
[75] GGT, 11 September 2019, *Access Arrangement Revision Proposal Response to ERA Draft Decision*, p. 2.

the December 2017 quarter to the December quarter 2018. GGT has used the actual Consumer Price Index for inflation up to the December 2017 quarter.[76]

145. In this final decision, the ERA has adjusted GGT's expenditure forecasts to account for the published Consumer Price Index up to the December quarter 2018 and then used the inflation parameter determined as part of the ERA's calculation of the rate of return for forecast inflation (1.14 per cent).

Required Amendment 1

The values for total revenue (nominal) must reflect the values set out in Table 15 of this final decision.

Operating expenditure

146. Rule 91 of the NGR states the criteria that the ERA must consider when approving a service provider's operating expenditure:

> **91 Criteria governing operating expenditure**
>
> (1) 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.
>
> (2) The forecast of required operating expenditure of a pipeline service provider that is included in the full access arrangement must be for expenditure that is allocated between:
>
> (a) reference services;
>
> (b) other services provided by means of the covered pipeline; and
>
> (c) other services provided by means of uncovered parts (if any) of the pipeline,
>
> in accordance with rule 93.

147. Rule 93 states:

> **93 Allocation of total revenue and costs**
>
> (1) Total revenue is to be allocated between reference and other services in the ratio in which costs are allocated between reference and other services.
>
> (2) Costs are to be allocated between reference and other services as follows:
>
> (a) costs directly attributable to reference services are to be allocated to those services; and
>
> (b) costs directly attributable to pipeline services that are not reference services are to be allocated to those services; and
>
> (c) other costs are to be allocated between reference and other services on a basis (which must be consistent with the revenue and pricing principles) determined or approved by the [ERA],

148. Rule 74 of the NGR states the specific requirements for forecasts and estimates:

[76] GGT, supporting information on operating and capital expenditure proposals.

> **74 Forecasts and estimates**
>
> (1) Information in the nature of a forecast or estimate must be supported by a statement of the basis of the forecast or estimate.
>
> (2) A forecast or estimate:
>
> (a) must be arrived at on a reasonable basis; and
>
> (b) must represent the best forecast or estimate possible in the circumstances.

149. Rule 71 of the NGR states the considerations that the ERA may and must take into consideration when evaluating forecast operating expenditure.

> **71 Assessment of compliance**
>
> (1) In determining whether capital or operating expenditure is efficient and complies with other criteria prescribed by these rules, the [ERA] may, without embarking on a detailed investigation, infer compliance from the operation of an incentive mechanism or on any other basis the [ERA] considers appropriate.
>
> (2) The [ERA] must, however, consider, and give appropriate weight to, submissions and comments received when the question whether a relevant access arrangement proposal should be approved is submitted for public consultation.

150. As stated in paragraph 11, for the purposes of tariff regulation the GGP comprises two notional pipelines, one of which is covered by the access arrangement while the other is a non-scheme pipeline not covered by the access arrangement. The assessment of GGT's proposed operating expenditure for AA4 includes establishing whether the proposed expenditure has been properly allocated between services provided by means of the covered pipeline and services provided by means of uncovered parts of the GGP, in compliance with rule 91(2) of the NGR (reproduced in paragraph 146).

GGT's initial proposal

151. Figure 1 shows the ERA's approved operating expenditure and GGT's actual and forecast expenditure for the AA3 period and GGT's initial proposed operating expenditure forecast for the AA4 period. GGT proposed $95.9 million for operating expenditure for AA4.

Figure 1: ERA approved forecast and GGT actual/forecast operating expenditure for AA3 and GGT's proposed operating expenditure for AA4 by year ($ million real at 31 December 2018)

Source: ERA's Reference Tariff Model 2016; GGT Access Arrangement Revision Proposal Supporting Information, 1 January 2019, p. 75, Table 38 and p. 88, Table 42.

152. GGT split its forecast operating expenditure into five main categories:

- APA Group operations
- major expenditure jobs
- GGT operations
- commercial operations
- corporate costs.

153. GGT used the base-step-trend method to forecast its operating costs. GGT selected 2017 as the base year for forecasting operating expenditure for the 2020 to 2024 access arrangement period. GGT's external auditor reviewed operating expenditure attributed to the covered pipeline in 2017.

154. GGT chose 2017 as the base year as it was the most recent calendar year with complete financial information at the time of preparing its access arrangement proposal.

155. Before applying the base-step-trend method, GGT allocated the components of base year operating expenditure for the GGP to the covered pipeline according to the cost allocation method set out in the final decision for AA3.[77] The cost allocation method set out for operating expenditure in the final decision for AA3 is consistent with rule 93 of the NGR. The ERA considers that the application of the cost allocation method for operating expenditure will yield the best forecast or estimate possible for operating expenditure in the circumstances of the GGP, as is required by rule 74(2) of the NGR.

[77] Economic Regulation Authority, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline,* 21 July 2016, paragraphs 424, 431, 432, 441 and 442.

156. The cost allocation method set out in the final decision for AA3 was that any operating expenditure not required solely to provide covered services would be allocated between the covered and uncovered pipelines as follows:

- APA operations expenditure (except for engineering and field services) and commercial and GGT operations operating expenditure (except for regulatory expenditure) would be allocated to the covered pipeline according to the ratio of the number of terajoules per day (TJ/d) of contracted capacity provided using the covered pipeline to the number of TJ/d of contracted capacity provided using the whole GGP (covered and uncovered pipelines) in the year in which the expenditure was incurred.
- 75 per cent of commercial and GGT operations operating expenditure within the regulatory expenditure category would be allocated to the covered pipeline.
- APA operations expenditures within the engineering and field services categories would be allocated to the covered pipeline based on the expected relative direct costs of those services.

157. GGT reviewed the allocation of the base year to determine if a simple extrapolation of the base-step-trend method could be used to forecast operating expenditure for the covered pipeline. After removing irregular costs that showed variability, which precluded simple extrapolation and expenditures that showed significant reductions over time (referred to as changing operating expenditure), GGT noted that the remaining covered pipeline operating expenditure was relatively stable over time and considered that simple extrapolation could be used for forecasting purposes.

158. To forecast operating expenditure for AA4, GGT started from the base year operating expenditure for the covered pipeline. GGT reviewed components of base year operating expenditure identified as changing operating expenditure to see if the base year cost was the most appropriate cost. GGT decided that the base year costs for the operating expenditure identified as changing operating expenditure were appropriate. GGT removed costs it regarded as irregular from the base year and forecast these costs separately.

159. GGT categorised four components of operating expenditure as changing operating expenditure in its initial proposal. These were costs that showed reductions over time and included field services, administration (commercial operations), marketing (commercial operations) and insurance costs. For each of these categories, GGT reviewed and concluded that the 2017 expenditure was the most appropriate amount to use in the base operating expenditure as changes between years were relatively small.

160. Irregular costs, which were separately forecast, included major expenditure jobs, regulatory costs, carbon liability costs and corporate costs.

161. This left the underlying stable operating expenditure for the covered pipeline, which was projected forward for the AA4 period (Table 16).

Table 16: GGT initial proposal calculation of starting base year operating expenditure ($ million nominal)

Operating expenditure components	2017 actual cost
2017 actual operating cost (efficient base year) (nominal)	15.985
Adjustment for 'changing' expenditure categories	0.000
Removal of irregular costs	
Major expenditure jobs	0.322
Regulatory costs	0.313
Corporate costs	2.883
Carbon liability costs[78]	0.000
Starting base year operating expenditure (nominal)	12.467
Starting base year operating expenditure in 31 December 2018 real dollars	**12.700**

Source: GGT AA Supporting Information Attachment 4 – Forecast Operating Expenditure, 1 January 2019.

162. To determine total operating expenditure, the separately forecast irregular costs were added to the base year operating expenditure. GGT did not propose any step changes in operating expenditure for AA4.

163. The resulting value was adjusted for a forecast real change in the price of labour to arrive at the forecast of operating expenditure for the access arrangement period.

164. GGT proposed to spend $2.8 million on major expenditure jobs in AA4. GGT classified major expenditure jobs as activities incurring large non-recurrent operating expenditures. In AA3, GGT had so far spent $0.93 million for 2015 to 2017 and forecast to spend an additional $0.88 million in 2018 to 2019, bringing total expenditure for major expenditure jobs in AA3 to $1.8 million.

165. The costs for major expenditure jobs were forecast bottom up from the type and scope of activities that were expected to occur in each year of the access arrangement period. The list of jobs forecast by GGT is set out in Table 40 of the access arrangement supporting information document.[79]

166. Regulatory costs, another component of irregular costs, comprised both GGT's internal regulatory costs and the ERA's standing and service charges.[80] GGT noted that regulatory costs were higher during the period of an access arrangement review compared to other periods. GGT further noted that regulatory costs were relatively

[78] Irregular cost for the carbon liability has been removed from the AA4 forecast following the repeal of the Australian Government tax on carbon emissions on 1 July 2014.

[79] Goldfields Gas Transmission Pty Ltd, *Access Arrangement Revision Proposal Supporting Information*, 1 January 2019, p. 81.

[80] ERA Standing and Specific charges form part of the ERA levy. This levy covers the costs of the ERA's gas access functions. Further information on this levy is set out in Economic Regulation Authority (national Gas Access Funding) Regulations 2009.

low in 2017 and so extrapolation of the 2017 base year may not lead to a forecast consistent with the requirements of rule 91(1) of the NGR, or the requirement under section 24 of the NGL.

167. As a result, GGT forecast its regulatory costs in two parts. GGT forecast the ERA standing and service charges from a pattern of those costs in previous years. This was then added to GGT's internal regulatory costs, which were forecast as part of an estimation of corporate costs for a standalone business based on a report prepared by KPMG.[81]

168. In AA3, total actual (2015 to 2017) and forecast (2018 to 2019) expenditure for regulatory costs was $3.3 million, or $0.66 million a year on average. GGT forecast a total expenditure of $5.6 million for AA4, equating to an average of $1.1 million a year for the period.

169. The irregular cost for the carbon liability was removed from the forecast for AA4 following the repeal of the Australian Government tax on carbon emissions on 1 July 2014.

170. In the ERA's final decision for AA3, corporate costs were determined using an estimate of the stand-alone corporate costs for operating the covered portion of the GGP.[82]

171. GGT provided a report from its consultant, KPMG, that included a benchmark of corporate costs based on a stand-alone business delivering the services of the covered pipeline. In its initial proposal, GGT used the median value of KPMG's range of benchmarked corporate costs. GGT's actual corporate costs in its 2017 base year were $2.9 million, while the forecast for the AA4 period using the KPMG report was $4.8 million for each year.

81 KPMG, *Corporate Cost Benchmarking: Goldfields Gas Pipeline*, June 2014.

82 ERA, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 21 July 2016, pp 92-96.

Table 17: GGT initial proposed operating expenditure for the AA4 period 2020 to 2024 ($ million real at 31 December 2018)

	2020	2021	2022	2023	2024	Total AA4
Starting: Base year operating expenditure	12.700	12.700	12.700	12.700	12.700	**63.500**
Add: Separate forecasts						
Major expenditure jobs	0.560	0.680	0.670	0.400	0.500	**2.810**
Regulatory costs	1.211	1.091	1.091	1.091	1.091	**5.575**
Corporate costs	4.789	4.789	4.789	4.789	4.789	**23.945**
Equals: Baseline forecast operating expenditure	19.260	19.260	19.250	18.980	19.080	**95.830**
Add: Real labour cost escalation						
Labour cost escalation	0.193	0.365	0.567	0.762	0.973	**2.860**
Equals: Total operating expenditure	**19.453**	**19.625**	**19.817**	**19.741**	**20.053**	**98.689**

Source: GGT AA Supporting Information Attachment 4 – Forecast Operating Expenditure, 1 January 2019

172. There was an error in GGT's model whereby the major expenditure jobs expenditure was subtracted from the total operating expenditure provided by GGT. The ERA confirmed this error with GGT. This meant that GGT's proposed operating expenditure value for AA4 was incorrect. Fixing the error in the model resulted in forecast operating expenditure of $98.689 million (real at 31 December 2018). The ERA corrected this error in its modelling.

173. Table 18 sets out GGT's initial proposed operating expenditure for AA4 separated into the five major reporting categories in real dollars at 31 December 2018. Table 19 provides the AA4 initial proposed operating expenditure in nominal dollars.

Table 18: GGT proposed forecast operating expenditure, 2020 to 2024 ($ million real at 31 December 2018)

Forecast operating expenditure	2020	2021	2022	2023	2024	Total
Pipeline operations	11.742	11.792	11.993	12.436	12.542	60.505
Major expenditure jobs	0.560	0.680	0.670	0.400	0.500	2.810
Commercial operation	0.591	0.593	0.603	0.625	0.631	3.043
Regulatory	1.211	1.091	1.091	1.091	1.091	5.575
Corporate costs	4.789	4.789	4.789	4.789	4.789	23.945
Total	**18.893**	**18.945**	**19.147**	**19.341**	**19.553**	**95.879**

Source: Goldfields Gas Transmission Pty Ltd, Access Arrangement Revision Proposal Supporting Information, 1 January 2019, p. 88, Table 42.

Note: As noted in paragraph 172 the total operating expenditure does not include major expenditure jobs. This value is incorrectly deducted from pipeline operations and commercial operations in this table.

Table 19: GGT proposed forecast operating expenditure, 2020 to 2024 ($ million nominal)

Forecast operating expenditure	2020	2021	2022	2023	2024	Total
Pipeline operations	12.186	12.466	12.916	13.643	14.017	65.227
Major expenditure jobs	0.581	0.719	0.722	0.439	0.559	3.019
Commercial operation	0.613	0.627	0.650	0.686	0.705	3.280
Regulatory	1.257	1.153	1.175	1.197	1.219	6.001
Corporate costs	4.970	5.063	5.157	5.254	5.352	25.796
Total	**19.606**	**20.028**	**20.619**	**21.219**	**21.852**	**103.324**

Source: Goldfields Gas Transmission Pty Ltd, Goldfields Gas Pipeline Access Arrangement Revision Proposal – Supporting Information, 1 January 2019, p. 88, Table 43.

Note: As noted in paragraph 172 the total operating expenditure does not include major expenditure jobs. This value is incorrectly deducted from pipeline operations and commercial operations in this table.

Draft decision

Assessment of operating expenditure

174. GGT's initial proposed operating expenditure forecast for AA4 of $95.9 million was 2.1 per cent higher than its estimated $93.9 million operating expenditure for AA3.[83]

175. The ERA's technical advisor EMCa reviewed GGT's approach to expenditure governance and management processes and the forecasting methods and relevant

[83] $ million real at 31 December 2018.

assumptions GGT applied, and assessed the projects and programs of work that formed the basis of its initial submission.

176. Both the ERA and EMCa considered that GGT did not explicitly explain its operating expenditure governance process in its proposal. However, from discussions with GGT representatives, the ERA and EMCa gained a better understanding of the operating expenditure governance processes:

- At the start of each calendar year, GGT prepared draft budgets on the operating activity for the following five years.
- The budgets were reviewed and monitored via processes within the organisation.

177. As set out in the previous section (see paragraphs 151 to 174), GGT developed its operating expenditure forecast using a base-step-trend method with 2017 as its base year. GGT also removed three components – being major expenditure jobs, corporate costs and regulatory costs – for which it prepared separate forecasts.

178. GGT also produced a trend forecast from this adjusted base, to account for its forecast of real labour cost escalation.

Base-step-trend forecast

179. GGT's removal of operating expenditure components it regarded as irregular, which could not be included in the base-step-trend forecast, resulted in a base year value of $12.48 million (nominal) which GGT converted to a figure of $12.70 million in real 2018 terms for the purposes of the base-step-trend forecast.

180. The cost components that made up the base year figure had declined in real terms and were less than the equivalent components in the ERA's AA3 allowance.

181. GGT identified four areas within the base year that it classified as changing operating expenditure as these components showed significant reductions over time. These areas were field services, administration (commercial operations), marketing (commercial operations) and insurance.

- Field services expenditure in 2017 was down $0.45 million compared to 2016. This reflected a reduction in the level of covered pipeline field services and was not due to a process of cost allocation. GGT considered the 2017 value represented the lowest sustainable cost of delivering the pipeline service.
- Commercial operations administration and marketing costs have declined since 2013 but the changes were relatively small after 2015. GGT observed that this was partially explained by the change in the way these costs were allocated between the covered pipeline and uncovered GGP assets. GGT did not make any additional adjustments to the 2017 base year cost.
- GGT's insurance premiums tend to follow economic cycles and in recent years premiums for property and liability insurance have fallen, which contributed to the lower insurance costs charged to the GGP in 2017. However, GGT did not adjust the insurance premium component of its base operating expenditure for AA4.

182. The ERA's draft decision reviewed the base year cost components including the areas identified by GGT as changing operating expenditure. The base year components were compared with previous years' actual values and with the ERA approved values for AA3. While costs in some components decreased over AA3, the decreases became smaller over the period and there was no evidence that the ERA

was aware of at the time of the draft decision that justified the inclusion of a value lower than the 2017 revealed cost.

183. The ERA was satisfied that the amount of the expenditure allocated to the covered pipeline for the operating expenditure base costs was allocated according to the cost allocation method set out in the AA3 final decision and therefore was properly allocated as required by rule 91(2) of the NGR.

184. Accordingly, the ERA considered GGT's proposed inclusion of these components as well as the proposed values were consistent with the rule 91(1) of the NGR and 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.

Step changes

185. GGT's initial proposal did not propose any step changes in its AA4 forecast operating expenditure. The ERA was not aware of any changes within GGT or in the gas pipeline sector that would result in a required positive or negative step change.

186. As noted at paragraph 180, GGT's base year components declined in real terms and were less than the equivalent components in the ERA's AA3 allowance. In its draft decision, the ERA was satisfied that a step change was not required for GGT in AA4.

187. In its review of GGT's initial proposed operating expenditure, EMCa also considered it reasonable that GGT proposed no step change.

Cost escalation

188. The only trend factor that GGT proposed in its initial AA4 operating cost forecast was for real labour cost escalation.

189. GGT adopted the method that the ERA used in the Western Power access arrangement final decision to determine real labour price changes.

190. GGT adopted the Western Australian Department of Treasury forecasts for the general Wages Price Index (WPI) and added a premium of 0.48 per cent per year for wages growth in the sector. After deducting GGT's forecast inflation rate of 1.87 per cent, the resulting value was the proposed real labour cost escalation growth rate.

191. Since the publication of the Western Power access arrangement final decision in 2018, the method for determining labour cost escalation adopted by the ERA has changed. The ERA's ATCO draft decision was published in April 2019, after GGT submitted its proposed access arrangement submission.

192. GGT did not forecast, as part of its initial operating expenditure forecast, a productivity adjustment. Given that a business with no productivity growth is unlikely to sustain real wage growth at above-average rates in the long term, it is not reasonable to expect wages growth for GGT to exceed average wages growth without increases in GGT's productivity. Also, there is no indication that economic activity during AA4 will put pressure on wages in the gas pipeline sector more than for other sectors.

193. An additional change to the method used for determining labour cost escalation from the Western Power decision is that the ERA now uses the Western Australian Treasury forecast Consumer Price Index (CPI) for Perth, instead of the Australian

Bureau of Statistics' eight capital cities CPI. As the ERA uses the Western Australian Treasury WPI in its calculation of the real labour cost escalation, to ensure that the inflation implicit in the WPI value is removed, the ERA uses the Western Australian Treasury CPI forecast to ensure a like-for-like comparison.

194. As a result, the labour cost escalation proposed by GGT was considered to not be the best forecast for AA4 and therefore, inconsistent with rule 74(2)(b) of the NGR.

195. The ERA calculated real labour escalation using the average of recent and forecast Western Australian Treasury WPI growth and CPI growth. The real labour escalation rate for the draft decision was 0.55 per cent. Table 20 below sets out the Western Australian Treasury data for WPI growth and CPI growth used in the ERA's draft decision calculation.

Table 20: Western Australian Treasury – Wage Price Index and Consumer Price Index data included in calculating the real labour cost escalation (%)

	2018/19 estimated actual	2019/20 budget estimate	2020/21 forward estimate	2021/22 forward estimate	2022/23 forward estimate	Annual average
Wage Price Index growth	1.75	2.25	2.75	3.00	3.25	2.60
Consumer Price Index growth	1.25	1.75	2.25	2.50	2.50	2.05

Source: WA Department of Treasury, Economic Forecasts – Major Economic Aggregates (online) [accessed 1 July 2019].

196. The labour escalation rate of 0.55 per cent was applied only to the portion of operating expenditure that contained labour, being 54.4 per cent of the forecast operating expenditure for GGT. This resulted in an increase in operating costs due to labour escalation of $1.271 million in total over AA4.[84]

197. The ERA was satisfied that the amount of the expenditure allocated to the covered pipeline for the operating expenditure labour escalation was allocated according to the cost allocation method set out in the AA3 final decision and was therefore properly allocated as required by rule 91(2) of the NGR.

Major expenditure jobs allowance

198. Major expenditure jobs are activities incurring large, non-recurrent operating expenditures and must be forecast bottom up from the type and scope of activities that are expected to occur in each year of the access arrangement period.

199. GGT proposed eight major expenditure jobs at a total cost of $2.81 million, which resulted in an average annual proposed allowance of $0.56 million per year. In AA3 the average expenditure for major expenditure jobs was $0.36 million per year.

200. The eight major expenditure jobs and their total proposed expenditure over AA4 were:

- $1.000 million for easement line of sight maintenance.
- $0.400 million for easement marker sign replacement.

[84] $ million real at 31 December 2018.

- $0.055 million for pipeline integrity management plan review.
- $0.055 million for safety management system review.
- $0.275 million for mainline valve and scraper station above-ground recoating.
- $0.175 million for mainline valve and scraper station bolted flange joint integrity program.
- $0.650 million for compressor station above ground recoating.
- $0.200 million for compressor station bolted flange joint integrity program.

201. GGT provided a description of each of the eight major expenditure jobs in its supporting information submission and provided further information on the projects at an onsite meeting.

202. The proposed easement line of sight expenditure was an allowance for an annual program of line of sight maintenance at a cost of $200,000 per year. GGT said that the project's costs were based on historical costs. The historical costs for easement line of sight maintenance showed that such work was conducted only every second year. This level of maintenance was considered appropriate by the ERA's technical advisor EMCa.

203. GGT did not provide any supporting information to justify the increase in easement line of sight maintenance from every second year to every year during AA4.

204. As the project was last undertaken in 2018, the ERA considered that it was likely that the project would be required to be undertaken in three of the five years of the AA4 period. As a result, the ERA determined that this major expenditure job should be reduced by $400,000, being two years' worth of easement line of sight maintenance.

205. The ERA reviewed the remaining seven major expenditure job projects. Three of the projects, the easement marker sign replacement, Pipeline Integrity Management Plan and Safety Management System reviews are projects required to be undertaken to be compliant with Australian Standards, GGT's pipeline licence and good industry practice.

206. GGT regarded the remaining four projects (above-ground recoating for the compressor stations and mainline valve sites and scraper stations, and the bolted flange joint integrity program for the compressor stations and mainline valve sites and scraper stations) as part of prudent and efficient pipeline operation, in accordance with good industry practice.

207. For the above-ground recoating projects, above ground pipework must be coated with an epoxy resin coating to prevent corrosion. The coating deteriorates over time and, when necessary, is repaired as part of routine field services. However, GGT found that eventually these spot repairs were insufficient, and the facility must be recoated.

208. For the bolted flange joint integrity program, the studs and nuts which were used to bolt together the flanges on the pipework at the mainline valve sites and scraper stations and at compressor stations when the GGP was constructed had no protective coatings to prevent corrosion. Over the last 25 years they had corroded, and this corrosion could put at risk the integrity of the pipeline and so the studs and nuts are required to be replaced with corrosion-protected studs and nuts.

209. The costs for the above-ground recoating were estimated from recent expenditure undertaken at the Ilgarari Compressor Station. The costs for the bolted flange joint program were estimated based on a similar stud and nut replacement program recently undertaken at the Mondarra Gas Storage Facility.

210. The ERA was satisfied that these projects for above-ground recoating and bolted flange joint integrity program were required to be undertaken, in line with good industry practice, and prudent and efficient expenditure.

211. The ERA considered that, except for the easement line of sight maintenance, the remaining seven major expenditure jobs met the criteria for inclusion as efficient operating expenditure for AA4. The easement line of sight maintenance proposed expenditure partially met the criteria for inclusion.

212. The ERA considered that $2.41 million of GGT's proposed major expenditure jobs project expenditure was consistent with rule 91(1) of the NGR and 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.

213. The ERA was satisfied that the amount of the expenditure allocated to the covered pipeline for the operating expenditure major expenditure jobs was allocated according to the cost allocation method set out in the AA3 final decision and was therefore properly allocated as required by rule 91(2) of the NGR.

Regulatory costs

214. GGP's regulatory costs comprise its internal regulatory costs and the ERA's standing charges and service charges.

215. GGT noted that its internal regulatory costs and the ERA's charges were higher when an access arrangement was under review and lower at other times. The regulatory costs were relatively low in 2017 following the AA3 final decision in June 2016. As a result, GGT considered that extrapolation from the base year in 2017 for regulatory costs would not lead to a forecast consistent with the requirements of rule 91(1) of the NGR.

216. The 2017 base year regulatory costs would have been $0.32 million. However, GGT proposed an allowance of $1.21 million in 2020, followed by $1.09 million in each of the remaining four years of the AA4 period.

217. GGT's proposed regulatory costs were based on estimates contained in a report that it commissioned from KPMG. GGT was asked to provide additional information on the regulatory costs and the response provided a derivation of its proposed allowance, comprising a KPMG estimate together with an allowance for ERA charges.

218. KPMG estimated that the cost of a regulatory function for a business such as GGT would range from $0.57 million to $0.93 million with a median of $0.75 million, not including ERA charges.

219. The ERA agreed with GGT that, due to the cyclical nature of regulatory cost expenditure, an extrapolation of the $0.32 million incurred in 2017 would not provide an efficient estimation of the amount required over AA4. However, the ERA considered that, over the full five years of an access arrangement period, the cyclical effect should average out. Accordingly, GGT's actual regulatory costs over the last

five years (made up of the last two years of AA2 and the first three years of AA3), including ERA charges, averaged $0.68 million per year in 2018 real dollars.

220. The $0.68 million average per year is made up of ERA charges of $0.45 million per year while GGT's internal regulatory costs average $0.23 million per year.

221. For AA4, GGT proposed an average allowance of $1.12 million per year in 2018 real terms. This is made up of $0.37 million per year for ERA charges and KPMG's median benchmark value of $0.75 million per year for GGT's internal regulatory costs. While GGT's proposed annual allowance in AA4 for ERA charges ($0.37 million) is marginally below the actual annual average costs for the last five years ($0.45 million) GGT's proposed allowance of $0.75 million a year for its internal regulatory costs was more than three times the annual average cost over the last five years of $0.22 million.[85]

222. GGT did not provide sufficient justification to increase its internal regulatory cost portion of the regulatory cost operating expenditure category by more than triple the last five years of actual revealed cost.

223. The revealed cost approach provides the best estimate for the regulatory costs in AA4. This is because the revealed cost can in this case be reliably measured as with most costs in GGT's proposal except for the corporate costs. The ERA considered that where the revealed cost can be reliably measured it should be used and evaluated against efficiency of those costs.

224. For each year of AA4, efficient operating expenditure would be $0.68 million, resulting in a total expenditure for regulatory costs in AA4 of $3.38 million. The ERA considered the determination of the regulatory costs by using the average of the last five years of revealed costs was consistent with rule 91(1) of the NGR and 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.

225. The expenditure allocated to the covered pipeline for the operating expenditure regulatory costs was allocated according to the cost allocation method set out in the AA3 final decision and was therefore properly allocated as required by rule 91(2) of the NGR.

Corporate costs

226. GGT initially proposed $23.945 million in corporate costs for AA4, or $4.789 million per year.[86]

227. GGT, being part of a larger corporate group, relies on the parent group for the provision of a range of corporate functions. The costs incurred in providing these corporate functions are costs attributable to the provision of services using the GGP, and a portion of these costs attributable to the GGP is, in turn, attributable to the provision of pipeline services using the covered pipeline.

228. In its financial accounting for the GGT Joint Venture, GGT recorded an allocation of APA Group corporate costs as corporate costs. APA corporate costs are allocated based on revenue of the entities within the APA Group. These corporate costs are

85 All amounts are in $ real as at 2018 terms.

86 $ million real at 31 December 2018.

then allocated between the covered pipeline and uncovered GGP assets using pipeline capacity (measured in TJ/d).

229. GGT advised that, as revenues varied among the entities in the APA Group, those allocations were more difficult as the group structure became more complex.

230. In the AA3 final decision, the ERA did not accept GGT's proposed corporate costs using the APA allocation method and instead had regard to a report prepared by KPMG for GGT, which determined the benchmark estimated corporate costs for a stand-alone business with characteristics similar to a gas transportation business based on the covered GGP. The ERA made several amendments to the estimated corporate costs in the KPMG report when making its final decision for AA3.

231. GGT engaged KPMG to again benchmark the estimated corporate costs for a stand-alone business based on the entire GGP (covered and uncovered) for AA4. The KPMG report estimated costs for:[87]

- Executive management and administration (including board of directors, chief executive officer, head office administration and human resources).
- Legal and corporate affairs (including general counsel, company secretarial, risk management and investor relations).
- Finance (including treasury, general financial accounting, general management accounting, financial reporting, the provision of financial services such as accounts payable and accounts receivable, and tax).
- Information and communications technology services (including the development and maintenance of company-wide compatible IT and communications systems and maintaining IT systems security).
- External relations (including government relations, business strategy and planning).
- Contract management.
- Economic and market regulation.

232. KPMG's report provided low, median and high estimates for each of the components of corporate costs. GGT removed the estimated economic and market regulation costs, which it forecast separately as regulatory costs (see paragraphs 214 to 225). For the remaining components, GGT used the median value of KPMG's range of estimated corporate costs for a stand-alone business in its proposal. These costs were then split between the covered and uncovered portions of the pipeline based on the covered and uncovered percentages of the capacity of the pipeline. The covered percentage of the pipeline is 53.96 per cent based on covered pipeline capacity of 109 TJ/d and the total capacity of the pipeline being 202 TJ/d.

233. As a result, the median value for corporate costs of the covered portion of the GGP in KPMG's report was $4.789 million a year.[88] GGT used this value for its initial proposed corporate costs for AA4.

234. The ERA considered that, where available, the revealed cost approach provides the best forecast of corporate costs to deliver the pipeline services unless there is

87 GGT, *Access Arrangement Revision Proposal Supporting Information – Attachment 2 – KMPG, Corporate Cost Benchmarking,19 December 2018 (Confidential)*, 1 January 2019, p. 10.

88 $ million real at 31 December 2018.

evidence that the services could be delivered prudently at a lower sustainable cost. Under the revealed cost approach, the forecast operating expenditure for the next access arrangement period is based on the most recent actual operating expenditure incurred by the service provider. The incentive-based regulatory approach of the NGL and NGR allows service providers to retain any savings from efficiencies and productivity that are achieved during a regulatory period. Therefore, using the recent actual expenditure should ensure that consumers share the benefit from those efficiencies. However, there may be circumstances where the revealed cost needs to be adjusted to remove any identified inefficiencies if the service provider is not responding to the efficiency incentives of the regulatory framework.

235. However, there is no true revealed cost for the GGP as the corporate costs that are attributed to the GGP are based on an allocation of corporate costs from a parent entity. In 2017, the corporate costs that were allocated to GGT were $2.937 million.

236. The ERA reviewed GGT's proposed approach to calculating corporate costs using the report prepared by KPMG. KPMG's report was prepared for the entire GGP (covered and uncovered) on a stand-alone basis. KPMG found the total corporate cost of running the GGP was not the sum of corporate support costs for each of the uncovered and covered sections. This was due to economies of scale and scope that would be achieved where all sections were operated by a single entity.

237. The KPMG report was based on a series of assumptions for the corporate costs of a stand-alone notional pipeline to deliver the services of the GGP. The KPMG report value of corporate costs was an estimate and was not a revealed cost. As the GGP is operated by GGT, which is part of the APA group, KPMG's assumption of a stand-alone notional pipeline did not provide a reasonable comparator of the costs that GGT, as a prudent operator, would incur to operate the GGP.

238. GGT used the median value of the range of KPMG's estimated corporate costs in its AA4 proposal. As stated, during the AA3 review the ERA made several amendments to the estimated median corporate costs in the KPMG report, as it considered the median value overestimated the efficient amount for an entity with the characteristics of the GGT.

239. The ERA still considered that KPMG's 2018 median value overestimated the efficient amount for an entity with the characteristics of the GGT, including that KPMG's report was prepared on a stand-alone basis and as such the median value included costs that would not be required if the entity had parental ownership, which GGT does.

240. KPMG stated in its report that: [89]

> By assuming GGT Pty Ltd to be a stand-alone entity, KPMG has not accounted for any economies of scale that may be afforded to APA Group by controlling multiple pipeline entities (e.g. APA Group in practice have one Chief Executive Officer (CEO) responsible for all of its pipeline entities as opposed to one CEO per entity). The cost of the CEO are therefore recovered across multiple entities. As part of our assessment, these same costs (scaled to reflect the size and complexity of the entity under analysis) are recovered via one entity – GGT Pty Ltd.

241. An example of costs that would not be required with group ownership compared to a stand-alone entity are the costs of being listed on the Australian Stock Exchange (ASX) in order to access efficiently priced capital. GGT, being part of a group

[89] GGT, *Access Arrangement Revision Proposal Supporting Information – Attachment 2 – KMPG, Corporate Cost Benchmarking,19 December 2018 (Confidential)*, 1 January 2019, p. 4.

corporate structure, would not require the level of stand-alone costs for these activities and as such the KPMG estimated costs are overestimated for a business with the corporate characteristics of GGT.

242. KPMG's report estimated that a stand-alone entity would require 31 full time staff to undertake the corporate activities of the business. GGT has three staff members (a general manager, office manager and management accountant) with resources for the day-to-day operation and management of the GGP provided by other related entities, as and when required.

243. The costs of having 31 full time corporate staff, as estimated in the KPMG report, overstated the costs for a business with the corporate characteristics of GGT. For example, head office accommodation suitable for 31 full time staff is not required with staff based in parent company locations around the country who can be used for the GGP when required from their current locations. The KPMG report overstates the office accommodation costs for a business with the corporate characteristics of GGT.

244. In addition, separate payroll, ICT and human resource systems, among others, would not be required as the services, systems and staff required to undertake these activities could be provided by the parent group using their existing systems and staff. While GGT would still be allocated a portion of these costs from the parent group as part of its corporate costs allocation in the 2017 base year value, the KPMG report overstated these costs for a business with the corporate characteristics of GGT as they were included in full, assuming the entity is a stand-alone business.

245. Being part of a larger company group should provide economies of scale for its corporate costs, and this is evidenced by the 2017 actual allocated corporate costs of the GGT being $2.937 million, which is less than the KPMG estimated value.

246. With the GGP operating under the structure described above, the ERA considered that the median estimated benchmark value of corporate costs in KPMG's report overestimated the efficient amount for an entity with the characteristics of GGT. The ERA considered that by taking into account the economies of scale benefits that come from group ownership of the pipeline, GGT's proposed $4.789 million per year would not provide the best estimate of GGT's covered pipeline corporate costs and that a best estimate would be lower than this value.

247. Rule 91(1) of the NGR states that the "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."

248. While KPMG's report has low, median and high cost ranges, all of these are based on a stand-alone business structure, which does not represent GGT's corporate structure.

249. The corporate costs allocated to GGT in 2017 were $2.937 million.[90] These corporate costs reflected some of the group ownership structure benefits and the associated economies of scale, as the costs reflect an allocation of corporate costs from the APA Group.

250. As noted above, the ERA considered that where appropriate, the revealed cost approach provided the best forecast of corporate costs to deliver the pipeline services

[90] $ million real at 31 December 2018.

unless there was evidence that the services could be delivered prudently at a lower sustainable cost.

251. While GGT's allocation of corporate costs was not a true revealed cost, it was an allocation capturing some of the group ownership structure benefits and the associated economies of scale of being part of the APA Group. In the absence of a true revealed cost to undertake the activities, the ERA used the 2017 allocated cost as provided by GGT in its proposal.

252. The ERA considered that GGT's 2017 base year corporate cost of $2.937 million was the best estimate available to achieve the lowest sustainable cost of delivering pipeline services and the ERA was not aware of a sustainable cost lower than the 2017 base year value for corporate costs. The alternative of using the KPMG report values would overestimate the efficient amount of corporate costs for an entity with the characteristics of GGT, including for the reason that KPMG's report was prepared on a stand-alone basis and as such the median value includes costs that would not be required if the entity had parental ownership, which GGT does.

253. Without further substantiation of the appropriate level of corporate costs, the level of expenditure reflected in the 2017 base year for corporate costs was a better estimate of what 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 and was therefore consistent with rule 91(1) of the NGR.

254. As a result, the ERA retained corporate costs as part of the base operating expenditure amount in the base-step-trend approach and did not forecast these costs separately as GGT did in its proposal by considering it to be an irregular operating expenditure item.

255. The amount of the expenditure allocated to the covered pipeline for the operating expenditure corporate costs was allocated according to the cost allocation method set out in the AA3 final decision and was therefore properly allocated as required by rule 91(2) of the NGR.

256. Given the reasoning and conclusions outlined at paragraphs 174 to 255, the ERA considered that $85.224 million of GGT's forecast operating expenditure for AA4 satisfied rules 74 and 91 of the NGR.[91] Table 21 summarises the ERA's operating expenditure forecast for AA4. GGT was required to amend the values for operating expenditure to reflect these values.

257. The ERA's draft decision included a required amendment to amend the operating expenditure to reflect the values set out in Table 21.

> **Draft Decision Required Amendment 3**
>
> GGT must amend the values for operating expenditure to reflect the values set out in Table 14 of [the] draft decision. [Table 21 of this final decision]

[91] Real dollars at 31 December 2019.

Table 21: ERA determined AA4 operating expenditure ($ million real at 31 December 2018)

	2020	2021	2022	2023	2024	Total AA4
Starting: Base year operating expenditure	15.637	15.637	15.637	15.637	15.637	**78.183**
Add: Separate forecasts						
Major expenditure jobs	0.560	0.480	0.670	0.200	0.500	**2.410**
Regulatory costs	0.676	0.676	0.676	0.676	0.676	**3.380**
Equals: Baseline forecast operating expenditure	16.873	16.793	16.983	16.513	16.813	**83.973**
Add: Real labour cost escalation						
Labour cost	0.152	0.203	0.257	0.301	0.358	**1.271**
Equals: Total operating expenditure	**17.025**	**16.995**	**17.240**	**16.813**	**17.171**	**85.244**

Source: ERA AA4 Operating Expenditure Draft Decision Model

GGT's response to the draft decision

258. GGT submitted a revised proposal for operating expenditure for the AA4 period in response to the ERA's draft decision. GGT noted that the ERA's draft decision required amendments to four components of the operating expenditure being:

- major expenditure jobs
- regulatory cost
- corporate costs
- labour cost escalation.

259. GGT noted that it had addressed the requirements from the ERA's draft decision by amending the four forecast operating expenditure components. GGT accepted the ERA's draft decision values for major expenditure jobs and regulatory costs (with appropriate adjustment for inflation).

260. GGT also accepted the ERA's draft decision method for corporate costs and labour cost escalation; however, the values proposed by GGT were different from the ERA's draft decision as GGT used an updated, 2018 corporate cost value in its revised proposal. Using the 2018 corporate cost value had a flow on effect to GGT's labour cost escalation resulting in a different value to that determined by the ERA in the draft decision.

261. GGT's amendments are set out and reviewed in the following section.

262. For all other components of its operating expenditure forecast, GGT maintained its initial proposal values which were accepted by the ERA in the draft decision.

263. GGT's revised operating expenditure proposal which includes amendments to the four components set out in paragraph 258 resulted in a revised proposal of $91.232 million for the AA4 period. GGT's revised proposal is $5.988 million more than the ERA determined in the draft decision, but is $7.457 million less than GGT's initial operating expenditure proposal.[92]

264. GGT's revised operating expenditure proposal is set out in Table 22.

Table 22: GGT revised proposal AA4 operating expenditure ($ million real at 31 December 2018)

	2020	2021	2022	2023	2024	Total AA4
Starting: Base year operating expenditure	12.700	12.700	12.700	12.700	12.700	**63.500**
Add: Separate forecasts						
Major expenditure jobs	0.560	0.480	0.670	0.200	0.500	**2.410**
Regulatory costs	0.676	0.676	0.676	0.676	0.676	**3.379**
Corporate costs	4.117	4.117	4.117	4.117	4.117	**20.585**
Equals: Baseline forecast operating expenditure	18.052	17.972	18.162	17.692	17.992	**89.872**
Add: Real labour cost escalation						
Labour cost	0.163	0.217	0.275	0.322	0.383	**1.360**
Equals: Total operating expenditure	**18.215**	**18.189**	**18.437**	**18.015**	**18.376**	**91.232**

Source: GGT, 11 September 2019, Access Arrangement Revision Proposal Response to ERA Draft Decision Submission, p. 3, Table 3.

Final decision

265. The ERA has reviewed GGT's revised proposal. As discussed at paragraphs 258 to 264, GGT made amendments to its revised proposal in the four sections of the draft decision where the ERA determined that GGT's proposed forecast did not comply with the requirements of the NGR. Each of these four sections is reviewed separately below.

266. As set out at paragraphs 144 and 145, in its revised proposal, GGT used a value of 1.87 per cent to convert its 2017 base year values into real 2018 dollars. The ERA has adjusted GGT's expenditure forecast to account for the published CPI for the 2018 calendar year. This value is 1.78 per cent and has been applied to GGT's 2017 base year values to convert them into real 2018 dollars for this final decision.

[92] Real dollars at 31 December 2018

Major expenditure jobs

267. In the ERA's draft decision, for the operating expenditure component major expenditure jobs, the ERA determined that a reduction was required due to an over-forecast for easement line of sight expenditure based on historical forecasts.

268. GGT has reviewed the ERA's draft decision and its historical line of sight maintenance costs. GGT accepted the ERA's draft decision that forecast costs should be reduced by $0.400 million for the AA4 period and amended its revised proposal to reflect this reduction.[93]

269. The ERA considers that GGT's revised proposal of $2.410 million for major expenditure jobs in the AA4 period is consistent with rule 91(1) of the NGR and would be incurred by a prudent service provider acting efficiently, in accordance with good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.[94]

Regulatory costs

270. In the ERA's draft decision, the ERA considered that GGT's initial proposed forecast for regulatory costs was not consistent with GGT's recently incurred regulatory cost and overestimated the regulatory costs for the AA4 period.

271. The ERA determined that, due to the cyclical nature of regulatory costs over an access arrangement period, an average of the last five years provided the most reliable estimate of regulatory costs in the AA4 period.

272. GGT accepted the ERA's draft decision estimate of annual regulatory costs of $0.676 million based on averaging actual regulatory costs over the last five years.[95]

273. When reviewing regulatory costs for the final decision, the ERA detected an error in its draft decision calculation of the average regulatory costs for the last five years. These costs were averaged in nominal dollar terms and should have been converted to a consistent dollar basis (real 2018 dollars). The ERA has recalculated the average of regulatory costs for the last five years in real 2018 dollars. As noted in paragraph 266, the ERA has used the actual CPI to the December quarter 2018 to calculate this value.

274. The revised five-year average for regulatory costs is $0.682 million per year.[96]

275. The ERA considers that the best forecast of GGT's regulatory costs (consistent with rule 74 of the NGR) is $0.682 million per year, totalling $3.408 million over the AA4 period. This value is consistent with rule 91(1) of the NGR as it would be incurred by a prudent service provider acting efficiently, in accordance with good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.

Corporate costs

276. As set out at paragraphs 226 to 255, the ERA in the draft decision determined that GGT's most recent value for corporate costs, being 2017 at that time, was the best

93 GGT, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission,* 11 September 2019, p. 4.

94 Real dollars at 31 December 2018

95 GGT, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission,* 11 September 2019, p. 4.

96 Real dollars at 31 December 2018

estimate available to achieve the lowest sustainable cost of delivering pipeline services.

277. GGT responded in its revised proposal that the 2017 base year corporate cost of $2.937 million used by the ERA in the draft decision was an allocation of APA Group corporate costs and at the present time, the annual variation in group-level corporate costs seemed to be small.

278. GGT stated that APA Group's 2019 financial report noted that, after adjustment for one-off costs (the retirement of a long-serving managing director and response to a proposal for acquisition of the group by another business), corporate costs had increased by only 3.4 per cent from 2016/17 to 2018/19 and this increase was mostly due to inflation over the period.[97]

279. GGT noted that the allocation of APA Group-level corporate costs to the GGP has changed from 2016/17 to 2018/19 as a result of a "relatively permanent change in the values of the allocation factors used".[98] The allocations were based on revenue earned. Revenue earned from gas transportation in the GGP rose as new contracts for transportation of gas to users located on the Eastern Goldfields Pipeline came into operation during 2018.

280. GGT noted that, because of the change in allocation factors, the allocation of corporate costs to the GGP, and to the covered pipeline, increased. The allocation for 2018 in GGT's revised proposal was now $4.117 million, based on the same allocation method but recognising higher GGP revenue.[99]

281. In its revised proposal, GGT accepted the ERA's view that an allocation of APA Group corporate costs could provide the best estimate available to achieve the lowest sustainable cost of delivering pipeline services. However, GGT noted that the best estimate now available reflected the 2018 revenue conditions. GGT expected these changed conditions to continue over the AA4 period because the GGP was expected to be fully contracted during that period.

282. The ERA has reviewed GGT's revised proposal. The ERA also sought and received additional information from GGT on its revised proposed corporate costs and the calculation method used.[100] The ERA has used this information to make its determination on GGT's corporate costs for the AA4 period.

283. In the draft decision, the ERA considered that GGT's initial value of $4.789 million was above what would be incurred by a prudent service provider acting efficiently, in accordance with good industry practice, to achieve the lowest sustainable cost of delivering pipeline services as required under rule 91(1) of the NGR.

284. GGT's initial corporate cost value was determined by KPMG in a corporate cost benchmarking report, minus a value for economic and market regulation which was

97 GGT, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission,* 11 September 2019, p. 4.

98 GGT, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission,* 11 September 2019, p. 4.

99 GGT, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission,* 11 September 2019, p. 4.

100 GGT, 22 November 2019, Response to Information request ERA 9; GGT, 29 November 2019, Response to Information Request 14

determined separately by GGT as part of its operating expenditure forecast.[101] KPMG's value was for the entire GGP and, to determine the amount to be allocated to the covered pipeline, GGT determined the relative capacity of the covered pipeline as a proportion of the total pipeline capacity (measured as TJ per day of capacity). At the time of GGT's initial proposal, this was a covered portion of 109TJ of the 202TJ total capacity of the pipeline, equating to 53.96 per cent.

285. In its draft decision, the ERA instead used GGT's APA Group corporate cost allocation for 2017 as the value that would be incurred by a prudent service provider acting efficiently, in accordance with good industry practice, to achieve the lowest sustainable cost of delivering pipeline services (see paragraphs 249 to 255).

286. As discussed above, GGT provided the ERA with its 2018 APA Group corporate cost allocation in its revised proposal. The covered pipeline portion of this allocation is $4.117 million out of a total allocation to the whole GGP of $5.989 million. GGT has allocated the covered pipeline portion of costs based on TJ per kilometre of contracted capacity in the covered pipeline over the TJ per kilometre of contracted capacity in the entire GGP. This resulted in 68.45 per cent of the corporate costs being allocated to the covered pipeline.

287. The ERA has reviewed this calculation and the allocation of APA Group corporate costs to the GGP based on the revenue from the GGP as a proportion of the total APA Group revenue. Due to the parent/subsidiary structure that the GGT operates under, GGT receives a portion of APA Group corporate costs that are estimated to be the costs required to perform the corporate cost activities for the GGP, but they are not the actual costs incurred to perform those activities.

288. The APA Group corporate costs for 2018 were significantly higher due to one-off costs of $11.3 million from the retirement of a long-serving managing director and response to a proposal for acquisition of the group by another business. GGT did not remove these costs to determine its forecast of corporate costs for AA4. In order to forecast the efficient corporate costs for AA4 that would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice to achieve the lowest sustainable costs of delivering pipeline services, these one-off costs should be removed. The ERA has adjusted the information from GGT to remove the $11.3 million from APA Group corporate costs that APA included in its accounts for the period 1 July to 31 December 2018.[102]

289. As a result, the corporate costs for the entire GGP, to be used to forecast the covered pipeline corporate costs, is $4.946 million.

290. The ERA considers that the allocation of GGT's corporate costs between the covered and uncovered pipeline on a TJ per kilometre of contracted basis does not result in the best forecast for the covered pipeline. As noted at paragraphs 228 and 255, based on statements from GGT in its initial proposal, the ERA was operating under the assumption in the draft decision that the amount of the expenditure GGT allocated to the covered pipeline for the operating expenditure corporate costs was allocated

[101] GGT, *Access Arrangement Revision Proposal Supporting Information – Attachment 2 – KMPG, Corporate Cost Benchmarking,19 December 2018 (Confidential)*, 1 January 2019, p. 10.

[102] Australian Pipeline Trust, *Results for announcement to the market for the half year ended 31 December 2018 (Appendix 4D)*, p. 5.

according to the cost allocation method set out in the AA3 final decision and was therefore properly allocated as required by rule 91(2) of the NGR.[103]

291. As the ERA determined in the AA3 final decision, and consistent with the allocation method in GGT's initial AA4 submission, corporate costs should be based on the relative capacity of the GGP to deliver covered services.[104] Allocation by TJ per kilometre (that is, a contracted capacity-distance relationship) is not meaningful for the purpose of allocating costs that would be incurred by a prudent and efficient service provider in delivering the covered services of the GGP. This is because the ERA is not satisfied that corporate costs vary with the distance gas is transported as opposed to the level of contracted capacity of the pipeline. On this basis, the ERA considers that the lowest sustainable corporate cost that would be incurred by a prudent and efficient service provider in delivering the covered services of the GGP should be based on the relative capacity of the GGP to deliver those services and that this allocation is consistent with rule 91(2) of the NGR. For the reasons stated above, the ERA considers that the allocation is in accordance with rule 93(2)(c) which requires the allocation between reference and other services on a basis (which must be consistent with the revenue and pricing principles) determined or approved by the ERA.

292. An allocation based on the relative capacity (109TJ of pipeline capacity on the covered pipeline divided by 202TJ of pipeline capacity on the entire GGP), which was the allocation method used by GGT in its initial AA4 proposal, results in an allocation of 53.96 per cent to the covered pipeline. As a result, $2.669 million is allocated to the covered pipeline.

293. As a result, the ERA determines that GGT's corporate operating expenditure is $2.669 million per year, totalling $13.345 million over the AA4 period, as this expenditure is consistent with rule 91(1) of the NGR and would be incurred by a prudent service provider acting efficiently, in accordance with good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.

Cost escalation

294. In its revised proposal, GGT noted that it had accepted the method and forecasts of price and labour cost escalation used by the ERA in the draft decision.

295. However, GGT noted that it had applied this method to a different cost base than used in the draft decision as a result of incorporating a higher corporate cost value into its proposed operating expenditure for the AA4 period.[105]

296. Therefore, the estimate of labour cost escalation in GGT's revised proposal was $0.089 million higher than the ERA's draft decision. GGT's total proposed labour escalation value in its revised proposal is $1.360 million over the AA4 period.[106]

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103 Economic Regulation Authority, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 21 July 2016, paragraphs 1871-1991.

104 Economic Regulation Authority, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 21 July 2016, paragraphs 457-458.

105 GGT, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission,* 11 September 2019, p. 5.

106 GGT, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission,* 11 September 2019, p. 4.

297. Since the GGT draft decision was published, the ERA has made an additional change to the way it calculates labour cost escalation.

298. In the draft decision, the real labour escalation growth rate was derived as the growth in the average WPI minus the growth in the average CPI (with the averages being based on estimated actual data for the indexes for 2018/19, budget estimates for 2019/20 and forward estimates for 2020/21, 2021/22 and 2022/23), a revised formula has been applied for the final decision.

$$Real\ labour\ escalation\ growth\ rate\ \% = \frac{1 + Average\ growth\ in\ WPI}{1 + Average\ growth\ in\ CPI} - 1$$

299. This revised formula results in a real labour cost growth escalation value of 0.54 per cent which the ERA has used in this final decision.

300. Using the revised method for calculating real labour cost escalation and incorporating the ERA's determination of corporate costs, the ERA has calculated the real labour cost escalation for the AA4 period to be $1.227 million for the AA4 period.

Base year expenditure

301. As set out above at Table 16, in GGT's initial proposal section, GGT initially forecast its base year operating expenditure at $12.700 million and separately forecast major expenditure jobs, regulatory costs and corporate costs.

302. In the ERA's draft decision, the ERA accepted GGT's base year costs of $12.700 million but did not accept GGT's separately forecast corporate costs. The ERA determined that GGT's corporate costs should be the value from its 2017 base year. As a result, the ERA determined a base year expenditure value for GGT of $15.637 million (being GGT's base year proposal of $12.700 million and GGT's 2017 corporate costs of $2.937 million), as set out above at Table 21. The ERA then separately forecast major expenditure jobs and regulatory costs on top of this base year value.

303. In its revised proposal, GGT again proposed a base year operating expenditure value of $12.700 million and separately forecast corporate costs as well as major expenditure jobs and regulatory costs.[107] The ERA has reviewed GGT's revised proposal on base year operating expenditure.

304. In this final decision, the ERA has determined that GGT's corporate costs should be a separately forecast value and not included in GGT's base year operating expenditure.

305. As set out at paragraph 266, the ERA has used a different CPI value to that used in its draft decision in determining GGT's real 2018 costs. Using this revised value in this final decision results in GGT's base year operating expenditure being $12.689 million.

306. As a result, the ERA determines that GGT's base year operating expenditure is $12.689 million per year. This expenditure is consistent with rule 91(1) of the NGR and would be incurred by a prudent service provider acting efficiently, in accordance

[107] GGT, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission,* 11 September 2019, p. 3, Table 3.

with good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.

307. Table 23 sets out the ERA's final decision operating expenditure for the GGP for AA4.

Table 23: ERA final decision determined AA4 operating expenditure ($ million real at 31 December 2018)

	2020	2021	2022	2023	2024	Total AA4
Starting: Base year operating expenditure	12.689	12.689	12.689	12.689	12.689	**63.445**
Add: Separate forecasts						
Major expenditure jobs	0.560	0.480	0.670	0.200	0.500	**2.410**
Regulatory costs	0.682	0.682	0.682	0.682	0.682	**3.408**
Corporate costs	2.669	2.669	2.669	2.669	2.669	**13.345**
Equals: Baseline forecast operating expenditure	16.600	16.519	16.710	16.240	16.539	**82.608**
Add: Real labour cost escalation						
Labour cost	0.147	0.196	0.248	0.290	0.346	**1.227**
Equals: Total operating expenditure	**16.747**	**16.715**	**16.958**	**16.530**	**16.885**	**83.835**

Source: ERA, Final Decision, Appendix 7, GGP Tariff Model, December 2019.

308. Table 24 sets out the ERA's final decision operating expenditure by category for the GGP for AA4.

Table 24: ERA final decision determined AA4 operating expenditure by category ($ million real at 31 December 2018)

Category	2020	2021	2022	2023	2024	Total AA4
Pipeline operations	12.222	12.268	12.318	12.358	12.411	**61.576**
Major expenditure jobs	0.560	0.480	0.670	0.200	0.500	**2.410**
Commercial operations	0.615	0.617	0.619	0.621	0.624	**3.097**
Regulatory costs	0.682	0.682	0.682	0.682	0.682	**3.408**
Corporate costs	2.669	2.669	2.669	2.669	2.669	**13.345**
Total operating expenditure	**16.747**	**16.715**	**16.958**	**16.530**	**16.885**	**83.835**

Source: ERA, Final Decision, Appendix 7, GGP Tariff Model, December 2019.

Required Amendment 2

The operating expenditure must reflect the values in Table 24 of this final decision.

Opening capital base

309. 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:

> **77 Opening capital base**
>
> …
>
> (2) If an access arrangement period follows immediately on the conclusion of a preceding access arrangement period, the opening capital base for the later access arrangement period is to be:
>
> (a) 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**:**
>
> (b) conforming capital expenditure made, or to be made, during the earlier access arrangement period;
>
> plus**:**
>
> (c) any amounts to be added to the capital base under rule 82, 84 or 86;
>
> plus:
>
> (c1) in relation to any existing extension specified in the extension and expansion requirements in accordance with rule 104(2), the following value:
>
> (i) the cost of construction of the extension;
>
> plus:
>
> (ii) capital expenditure on the extension since construction of the extension;
>
> less:
>
> (iii) depreciation of the extension since the date the extension was commissioned; and
>
> (iv) the value of pipeline assets constituting the extension disposed of since commissioning of the extension;
>
> less:
>
> (d) depreciation over the earlier access arrangement period (to be calculated in accordance with any relevant provisions of the access arrangement governing the calculation of depreciation for the purpose of establishing the opening capital base); and
>
> (e) redundant assets identified during the course of the earlier access arrangement period; and

(f) the value of pipeline assets disposed of during the earlier access arrangement period.

310. Rule 79 of the NGR sets out the new capital expenditure criteria:

> **79 New capital expenditure criteria**
>
> (1) Conforming capital expenditure is capital expenditure that conforms with the following criteria:
>
> (a) 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; and
>
> (b) the capital expenditure must be justifiable on a ground stated in subrule (2); and
>
> (c) the capital expenditure must be for expenditure that is properly allocated in accordance with the requirements of subrule (6).
>
> (2) Capital expenditure is justifiable if:
>
> (a) the overall economic value of the expenditure is positive; or
>
> (b) the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure; or
>
> (c) the capital expenditure is necessary:
>
> (i) to maintain and improve the safety of services; or
>
> (ii) to maintain the integrity of services; or
>
> (iii) to comply with a regulatory obligation or requirement; or
>
> (iv) to maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred (as distinct from projected demand that is dependent on an expansion of pipeline capacity); or
>
> (d) the capital expenditure is an aggregate amount divisible into two parts, one referable to incremental services and the other referable to a purpose referred to in paragraph (c), and the former is justifiable under paragraph (b) and the latter under paragraph (c).
>
> (3) In deciding whether the overall economic value of capital expenditure is positive, consideration is to be given only to economic value directly accruing to the service provider, gas producers, users and end users.
>
> (4) In determining the present value of expected incremental revenue:
>
> (a) a tariff will be assumed for incremental services based on (or extrapolated from) prevailing reference tariffs or an estimate of the reference tariffs that would have been set for comparable services if those services had been reference services; and
>
> (b) incremental revenue will be taken to be the gross revenue to be derived from the incremental services less incremental operating expenditure for the incremental services; and
>
> (c) a discount rate is to be used equal to the rate of return implicit in the reference tariff.
>
> (5) If capital expenditure made during an access arrangement period conforms, in part, with the criteria laid down in this rule, the capital expenditure is, to that extent, to be regarded as conforming capital expenditure.

(6) Conforming capital expenditure that is included in an access arrangement revision proposal must be for expenditure that is allocated between:

(a) reference services;

(b) other services provided by means of the covered pipeline; and

(c) other services provided by means of uncovered parts (if any) of the pipeline,

in accordance with rule 93.

311. Rule 93 states:

93 Allocation of total revenue and costs

(1) Total revenue is to be allocated between reference and other services in the ratio in which costs are allocated between reference and other services.

(2) Costs are to be allocated between reference and other services as follows:

(a) costs directly attributable to reference services are to be allocated to those services; and

(b) costs directly attributable to pipeline services that are not reference services are to be allocated to those services; and

(c) other costs are to be allocated between reference and other services on a basis (which must be consistent with the revenue and pricing principles) determined or approved by the [ERA]…

GGT's initial proposal

312. GGT initially proposed an opening capital base for AA4 of $380.521 million, calculated as shown in Table 25.

Table 25 GGT's initial proposal opening capital base for AA4 ($ million nominal)

	2015	2016	2017	2018	2019
Opening capital base	390.362	393.124	389.164	386.631	383.285
Proposed conforming capital expenditure	3.334	1.409	1.432	1.025	1.762
Capital depreciation	0.573	5.369	3.966	4.371	4.525
Closing capital base	393.124	389.164	386.631	383.285	380.521

Source: Goldfields Gas Transmission Pty Ltd, 21 December 2018, *PUBLIC AA tariff model 2020-2024 (1 January 2019)*.

313. Table 26 shows the AA3 final decision forecast capital expenditure, GGT's initial proposed capital expenditure for the AA3 period and the differences by asset class. GGT's initial proposed capital expenditure for AA3 was $0.452 million, or 4.8 per cent, less than the ERA's AA3 final decision forecast.[108]

[108] $ million nominal.

Table 26 AA3 final decision forecast capital expenditure and GGT's initial proposed conforming AA3 capital expenditure by asset class ($ million nominal)

	ERA final decision forecast AA3 capital expenditure (A)	Proposed conforming AA3 capital expenditure (B)	Difference (B - A)
Pipeline and laterals	4.206	2.599	(1.607)
MLV and scraper stations	0.537	0.111	(0.426)
Compressor stations	2.089	2.496	0.406
Receipt and delivery points	1.034	0.331	(0.703)
SCADA, communications and electronic equipment	0.516	2.135	1.619
Cathodic protection	0.243	0.075	(0.168)
Maintenance bases and depots	0.167	0.357	(0.190)
Other depreciable assets	0.622	0.858	0.237
Non-depreciable assets	0.000	0.000	0.000
Total	**9.414**	**8.962**	**(0.452)**

Source: ERA analysis based on ERA, July 2016, *AA3 Final Decision Tariff Model;* ERA, 21 July 2016, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline,* p. 140, Table 57; and GGT, 1 January 2019, *GGP Public AA tariff model 2020-2024.*

314. GGT's initial proposed capital expenditure was less than the AA3 final decision forecast capital expenditure due to:

- GGT not undertaking certain projects which were included in the AA3 final decision capital expenditure forecast.
- GGT expecting that some projects included in the AA3 final decision capital expenditure forecast would be delivered for less than the forecast amount.

315. The underspend on capital expenditure for projects that were included in the AA3 capital expenditure forecast was offset by:

- Overspending on some projects that were included in the forecast. The most significant of these were four compressor station upgrades that were undertaken as one combined project (discussed in paragraphs 356 to 357) and the national satellite clear SCADA project (discussed in paragraphs 384 to 386).
- Some projects undertaken during AA3 not being included in the AA3 final decision capital expenditure forecast.

316. GGT's actual (or estimated actual) capital expenditure was substantially below its initial forecast of capital expenditure over the past two access arrangement periods. As shown in Table 27, GGT's actual capital expenditure was 29.21 per cent below its initial forecast for AA2 and its estimated actual capital expenditure was 36.61 per cent below its initial forecast for AA3. There were also substantial variances at an asset class level over these two periods. The ERA noted in the draft decision that GGT's history of overestimating capital expenditure forecasts implied that GGT's forecasting

processes were not producing reliable forecasts. This was taken into account in the draft decision when the ERA evaluated GGT's proposed capital expenditure for AA4.[109] The extent of GGT's overestimation of capital expenditure in AA3 was the basis for the adjustment applied to the proposed capital expenditure for the remote terminal unit program in the draft decision, discussed in paragraphs 511 to 518 of this final decision.

[109] ERA, 31 July 2019, *Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, p. 54, paragraph 240.

Table 27 GGT initial proposed capital expenditure and actual capital expenditure for AA2 and AA3 ($ million real as at 31 December 2018)

	GGT initial proposal (A)	Actual expenditure (B)	Variance $ (B - A)	Variance % (B / A)
AA2				
Pipeline and laterals	(0.069)	(0.057)	(0.012)	-17.02%
Mainline valve and scraper stations	0.000	0.000	0.000	0.00%
Compressor stations	2.486	1.735	0.751	-30.22%
Receipt and delivery point facilities	0.345	0.320	0.025	-7.17%
SCADA and communications	3.556	2.302	1.254	-35.27%
Maintenance bases and depots	1.550	1.142	0.408	-26.33%
Other assets	0.790	0.688	0.103	-13.00%
Total AA2	**8.658**	**6.129**	**2.529**	**-29.21%**
AA3				
Pipeline and laterals	6.166	2.696	3.470	-56.27%
Mainline valve and scraper stations	0.721	0.116	0.605	-83.90%
Compressor stations	2.625	2.496	0.129	-4.90%
Receipt and delivery point facilities	1.579	0.336	1.242	-78.70%
SCADA and communications	1.424	2.208	-0.784	55.04%
Cathodic protection	0.296	0.074	0.221	-74.88%
Maintenance bases and depots	0.687	0.354	0.333	-48.51%
Other assets	0.938	0.870	0.068	-7.27%
Total AA3	**14.435**	**9.151**	**5.284**	**-36.61%**

Source: ERA analysis based on (A) For AA2 – GGT, 2 March 2016, Response to ERA 23; For AA3 - GGT, 15 August 2014, Tariff model 2015 – 2019; *(B) GGT*, 1 January 2019, *GGP Public AA tariff model 2020-2024.*

Draft decision

317. In the draft decision, the ERA assessed GGT's proposed opening capital base for AA4 according to rules 77 and 79 of the NGR. This included:

- Determining GGT's opening capital base for AA4, which included an assessment of:
  - conforming capital expenditure in AA3

  - capital contributions
  - depreciation.
- Assessing GGT's general method of calculating the capital base.

318. The ERA's assessment of the opening capital base also considered GGT's governance and investment management framework and assessed how the framework applied to actual capital expenditure during AA3.

319. The ERA concluded that while GGT had investment management processes in place that were consistent with common industry practice for businesses with similar levels of complexity and capital expenditure, GGT's history of capital expenditure forecasts exceeding the level of expenditure actually incurred implied that its capital expenditure forecasting processes were not producing reliable forecasts.[110]

320. The ERA's view was supported by EMCa's conclusions on GGT's governance processes.[111] EMCa assisted the ERA as a technical advisor to assess whether GGT's actual and proposed capital expenditure during AA3 was conforming capital expenditure that should be rolled into the opening capital base for AA4. EMCa also assisted the ERA to assess GGT's proposed forecast capital expenditure for AA4. EMCa reviewed GGT's approach to investment governance and management systems, procedures and practices, focusing on:

- The alignment of GGT's corporate governance framework with GGT's corporate objectives, including its regulatory and statutory obligations.
- The alignment of GGT's governance framework with good industry practice.
- Evidence that the processes and procedures in place within GGT are consistently applied by GGT in practice.
- The effectiveness of GGT's governance process.

321. EMCa's conclusions on the proposed conforming capital expenditure for AA3 were:

- GGT advised that it did not develop business cases for the AA3 projects that were undertaken but were not included in the AA3 final decision capital expenditure forecast. Rather APT Pipelines (WA) Pty Limited, as pipeline operator, was required to obtain authorities for expenditure for GGT's authorisation for all items of capital expenditure. While EMCa considered that the authorities for expenditure were adequate for reporting and monitoring small variations in small expenditure items, EMCa did not consider them sufficient to support the expenditure of hundreds of thousands of dollars or more.[112]
- GGT did not produce change control documentation and project close-out reports for the AA3 projects/programs it undertook. EMCa considered that GGT

110 ERA, 31 July 2019, *Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, p. 56, paragraph 243.

111 Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* pp. 12-14, paragraphs 63-69.

112 Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 66. Projects exceeding a hundred thousand dollars of capital expenditure which were undertaken during AA3 but not included in the AA3 final decision capital expenditure forecast were the Wiluna compressor controls upgrade ($1.216 million nominal, discussed in paragraph 361), replacement trucks ($0.426 million nominal, discussed in paragraph 423) and site accommodation upgrade program ($0.315 million nominal, discussed in paragraph 363).

would have benefited from reviews of the projects with significant variations from their initial scope and cost expectations. This would help identify the drivers for these variations, rectify those drivers where practicable and then apply the improved forecasting practices to the development of the AA4 capital expenditure forecast.[113]

322. EMCa concluded that GGT's method for estimating capital expenditure was consistent with common industry practice for businesses with similar levels of complexity and capital expenditure, but that the outcomes of GGT's approach indicated that there were material flaws in the application of its processes. The outcomes observed by EMCa were:

- A track record of GGT significantly underspending against forecasts.[114]
- Volatility in spending at an asset category level against the amounts included for each asset category in the AA3 final decision forecast capital expenditure.[115]

323. As stated at paragraph 11, for the purposes of tariff regulation the GGP comprises two notional pipelines, one of which is covered by the access arrangement while the other is a non-scheme pipeline. The ERA's draft decision assessment of GGT's proposed capital expenditure for AA3 and AA4 included establishing whether the proposed expenditure was allocated between services provided by means of the covered pipeline and or the uncovered parts of the GGP in compliance with rule 79(6) of the NGR (reproduced in paragraph 310).

324. The ERA considered that the allocation of costs between the covered and uncovered pipeline set out in the final decision for AA3 provided a means for allocating capital expenditure between services that was consistent with rule 79(6) of the NGR.[116] Therefore, the ERA's draft decision assessment of the capital expenditure GGT proposed to include in the opening capital base for AA4 examined whether the proposed conforming capital expenditure had been allocated to the covered pipeline consistent with this cost allocation method.

325. The cost allocation method set out in the final decision for AA3 was that any capital expenditure on assets that could be used in the delivery of services by both the covered pipeline and uncovered pipeline would be allocated between the two notional pipelines as follows:

- For expenditure on compressor station assets where capital expenditure could not be attributed to a specific compressor unit, the amount of that expenditure allocated to the covered pipeline would be apportioned according to the ratio of covered pipeline compressor units to the total number of compressor units at that station.
- For expenditure on other assets that could be used for both the covered pipeline and uncovered pipeline, the amount of that expenditure allocated to the covered pipeline would be apportioned according to the ratio of terajoule kilometres of

113 Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 66.

114 Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 102-103.

115 Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 104.

116 Economic Regulation Authority, 21 July 2016, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, paragraphs 1974 – 1991.

contracted capacity provided using the covered pipeline to the number of terajoule kilometres of contracted capacity provided using the GGP in the year in which the expenditure was made. GGT estimated that this ratio was 69.9 per cent for the AA3 period. The ERA reviewed this estimate and considered that it had been calculated in accordance with the agreed cost allocation method.

Pipeline and laterals

326. As shown in Table 26, GGT initially proposed $2.599 million of capital expenditure within the pipeline and laterals asset class for the AA3 period. This was $1.607 million less than the capital expenditure for the pipeline and laterals asset class included in the AA3 final decision forecast capital expenditure.

327. The ERA determined in the draft decision that $2.535 million of capital expenditure for pipeline and laterals assets during AA3 was conforming capital expenditure.

328. The AA3 final decision included forecast capital expenditure for eight projects within the pipeline and laterals asset class. GGT's initial submission indicated that GGT expected it would have undertaken five of these projects by the end of AA3. Also, GGT expected it would have undertaken three additional projects within the pipelines and laterals asset class that were not included in the AA3 final decision forecast.

329. GGT's initial proposed conforming capital expenditure for the five projects which it expected to undertake within AA3 that were included in the AA3 final decision forecast capital expenditure was as follows:

- $1.960 million for the 16 inch mainline in-line inspection, 14 inch mainline in-line inspection and Newman Lateral in-line inspection projects, collectively referred to as the mainline in-line inspection projects.
- $0.093 million for easement repair for in-line inspection.
- $0.350 million for in-line inspection verification dig-ups.

330. The proposed capital expenditure for each of the five pipelines and laterals projects listed in paragraph 329 was less than the respective amounts included for each in the AA3 final decision forecast capital expenditure. GGT advised that the reasons for the underspends were:

- Mainline in-line inspection project – The costs of completing the work under the contract with the third-party service provider engaged to complete the work were lower than forecast in the business case, as were internal labour costs.
- Easement repair for in-line inspection - The mobilisation costs for the project were lower than forecast. Additionally, some easement defects were thought to have been rectified as part of routine maintenance activity during AA3.
- In-line inspection verification dig-ups – The number of verification digs carried out during AA3 will be lower than the number forecast, and the levels of damage identified by the digs were generally low.[117]

331. According to GGP's initial proposal, these three projects would have been carried out during AA3 for less than the amounts included in the AA3 final decision capital expenditure for these projects, without significant variations in these project scopes

[117] Goldfields Gas Transmission Pty Ltd, 19 March 2019, *Response to information request EMCa 22.*

from their original scopes. Therefore, the ERA considered that these projects were carried out efficiently during AA3. The ERA also considered that carrying out these projects is in accordance with good industry practice.[118] The ERA therefore concluded in the draft decision that the mainline in-line inspection project, the easement repair for in-line inspection project and the in-line inspection verification dig-ups satisfied rule 79(1)(a) of the NGR.

332. The ERA considered that the mainline in-line inspection project was justifiable because it covers capital expenditure necessary to maintain and improve the safety of services, to maintain the integrity of services and to comply with a regulatory obligation or requirement.[119] These are justifiable grounds for capital expenditure under rules 79(2)(c)(i), 79(2)(c)(ii) and 79(2)(c)(iii) of the NGR. The ERA therefore considered that the mainline in-line inspection project satisfied rule 79(1)(b) of the NGR.

333. The ERA considered that the easement repair for in-line inspection project was justifiable to maintain the integrity of services, which is a justifiable ground for capital expenditure under rule 79(2)(c)(i) of the NGR.[120] The ERA therefore considered that the easement repair for in-line inspection project satisfied rule 79(1)(b) of the NGR.

334. The ERA considered that the in-line inspection verification dig-ups were justifiable to maintain the integrity of services, which is a justifiable ground for capital expenditure under rule 79(2)(c)(ii) of the NGR.[121] The ERA therefore considered that the in-line inspection verification dig-up satisfied rule 79(1)(b) of the NGR.

335. GGT's initial proposed conforming capital expenditure for the three projects within the pipelines and laterals asset class that were not included in the AA3 final decision capital expenditure forecast was as follows:

- $0.064 million for the additional capacity feasibility load financial year 2018.
- $0.003 million for the Wiluna lateral cathodic protection surge protection upgrade.

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118 This maintains the ERA's conclusions expressed in the AA3 draft decision and the AA3 final decision on the alignment of the projects comprising the mainline in-line inspection project, the in-line inspection verification dig-ups and the easement repair for in-line inspection project with good industry practice. The ERA's conclusion on these projects in the draft decision was supported by EMCa's technical opinion that the capital expenditure projects in the pipeline and laterals asset class initially proposed as conforming capital expenditure are likely to satisfy the capital expenditure criteria. ERA, 17 December 2015, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, paragraph 398. ERA, 21 July 2016, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, paragraph 616. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 135.

119 The advice provided by EMCa as technical advisor for the AA3 final decision supported that the mainline in-line inspection project was necessary to maintain and improve the safety of services, to maintain the integrity of services and to comply with a regulatory obligation or requirement. Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement,* December 2015, paragraph 154.

120 The advice provided by EMCa as technical advisor for the AA3 final decision supported that the in-line inspection verification dig-ups were necessary to maintain the integrity of services. Energy Market Consulting Associates, December 2015, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 154.

121 The advice provided by EMCa as technical advisor for the AA3 final decision supported that the easement repair for in-line inspection project was necessary to maintain the integrity of services. Energy Market Consulting Associates, December 2015, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 154.

- $0.148 million for the Kalgoorlie south flow computer upgrade.

336. In response to an information request, GGT advised that the proposed capital expenditure for the additional capacity feasibility load project was for preliminary engineering design work on a possible expansion of the GGP and initial investigations into the land access issues which might arise if expansion were to proceed. GGT advised that, at the date of submission of the access arrangement revision proposal for AA4, there was insufficient commitment to capacity development for GGT to propose an expansion of the GGP. In its response, GGT requested that the capital expenditure for the additional capacity feasibility load project be included in a speculative capital expenditure account until there was sufficient commitment from prospective users to allow expansion of the GGP.[122] Consequently, the proposed capital expenditure for the additional capacity feasibility load project was excluded from the regulatory asset base for AA3. The ERA concluded that this expenditure should be included in a speculative capital account.[123]

337. The ERA considered that the Wiluna lateral cathodic protection surge protection upgrade capital expenditure was of a nature that it was justifiable to maintain the integrity of the services, which is a justifiable ground for capital expenditure under rule 79(2)(c)(ii) of the NGR. The ERA therefore concluded that this expenditure satisfied rule 79(1)(b) of the NGR. As stated in paragraph 319, the ERA's review of GGT's investment management processes concluded that these are consistent with common industry practice for businesses of similar complexity and similar levels of capital expenditure. This conclusion was based on technical advice from EMCa that GGT's processes for reporting and monitoring small variations in small expenditure items were adequate. The ERA was therefore satisfied that the capital expenditure for the Wiluna lateral cathodic protection surge protection upgrade was incurred in accordance with good industry practice and would be incurred by a prudent service provider acting efficiently. The ERA therefore concluded that the capital expenditure for this item satisfied rule 79(1)(a) of the NGR.

338. The AA3 final decision included six separately identified projects for flow computer upgrades within the receipt and delivery points asset class. However, this did not include the flow computer at Kalgoorlie south. The ERA considered the capital expenditure for the Kalgoorlie south flow computer, and the other flow computers upgraded during AA3, was justifiable because it covers capital expenditure necessary to maintain the integrity of services, which is a justifiable ground for capital expenditure under rule 79(2)(c)(ii) of the NGR. This view was supported by EMCa's technical advice that the flow computer upgrades undertaken during AA3 were likely to satisfy the conforming capital expenditure criteria.[124]

339. GGT included capital expenditure for three flow computers upgraded during AA3 within the pipeline and laterals, receipt and delivery points and SCADA, communications and electronic equipment asset classes. The flow computers upgraded during AA3 are the flow computers at Leonora, Kalgoorlie South and Jundee. GGT explained that the capital expenditure for these flow computers was allocated to more than one asset class because, in operation, these assets interact

122 Goldfields Gas Transmission Pty Ltd, 18 July 2019, *Response to information request ERA 7.*

123 ERA, 31 July 2019, *Draft Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, paragraphs 468 to 477.

124 Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 150.

with and function as part of more than one part of the distribution system.[125] The ERA evaluated the efficiency of the proposed capital expenditure for the three flow computers as a combined amount for the draft decision.

340. The average unit cost of upgrading the flow computers incurred during AA3 ($0.131 million) did not significantly exceed the average amount for each flow computer upgrade included in the AA3 final decision capital expenditure forecast ($0.110 million).[126] Based on this and EMCa's technical advice that the average unit cost incurred was reasonable, the ERA concluded that the capital expenditure for the flow computers, including the $0.148 million of capital expenditure included within the pipeline and laterals asset class, was consistent with an amount that would be incurred by a service provider acting efficiently and consistent with good industry practice and therefore satisfied rule 79(1)(a) of the NGR.[127]

341. The ERA was satisfied that the expenditure GGT proposed to allocate to the covered pipeline for the pipeline and laterals projects, other than the capital expenditure for the additional capacity feasibility load project, was allocated according to the cost allocation method set out in the AA3 final decision and therefore properly allocated as required by rule 79(6) of the NGR. As outlined in paragraphs 331 to 335, the ERA concluded that all the projects comprising the initially proposed AA3 conforming capital expenditure for the pipeline and laterals asset class, other than the capital expenditure for the 'additional capacity feasibility load' project, satisfied rules 79(1)(a) and 79(1)(b) of the NGR. The ERA therefore concluded that the proposed AA3 conforming capital expenditure for the pipeline and laterals asset class, other than the capital expenditure for the 'additional capacity feasibility load' project, satisfied the criteria for conforming capital expenditure under rule 79(1) of the NGR. Capital expenditure of $2.535 million for the pipeline and laterals asset class was therefore included in the regulatory asset base for AA3 in the draft decision.

342. The conforming capital expenditure included in the regulatory asset base for AA3 for the pipeline and laterals asset class is shown in Table 28 below. GGT subtracted $0.018 million from its proposed 2015 conforming capital expenditure for the GGT Gorgon interconnect project. The draft decision conforming capital expenditure also subtracted this amount as Table 28 shows.

125 Goldfields Gas Transmission Pty Ltd, 19 March 2019, *Response to information request EMCa 22.*

126 Nominal dollars.

127 Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 147.

Table 28 ERA draft decision conforming capital expenditure for pipeline and laterals asset class (AA3) ($ million nominal)

Project/Work item	2015	2016	2017	2018	2019	AA3 total
Mainline in-line inspection	1.608	0.351	0.000	-	-	1.960
Easement upgrade for in-line inspection	0.093	-	-	-	-	0.093
In-line inspection verification digs	-	0.075	0.274	0.001	-	0.350
Additional capacity feasibility load financial year 2018 (39009)	-	-	-	-	-	-
Wiluna lateral cathodic protection surge protection upgrade	0.003	-	-	-	-	0.003
Kalgoorlie south flow computer upgrade	0.081	0.066	0.001	-	-	0.148
GGT Gorgon interconnect	-0.018	-	-	-	-	-0.018
Total conforming AA3 capital expenditure - Pipeline and laterals	**1.766**	**0.492**	**0.276**	**0.001**	**-**	**2.535**

Note: Numbers may not add due to rounding.

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 62, Table 19.

Mainline valve and scraper stations

343. As shown in Table 26, GGT initially proposed $0.111 million of capital expenditure within the mainline valve and scraper stations asset class for the AA3 period. This was $0.426 million less than the capital expenditure for the mainline valve and scraper stations asset class included in the AA3 final decision capital expenditure forecast. The underspend was due to a project that was included in the forecast not being undertaken within AA3. Additionally, for the project that was undertaken during AA3, fewer costs were incurred than forecast.

344. The AA3 final decision included forecast capital expenditure for a project to install scraper station facilities at the Dampier to Bunbury pipeline interconnection. GGT advised that no capital expenditure was incurred for this project during AA3, and therefore no capital expenditure for this project was included in the proposed regulatory asset base. GGT advised that this project will eventually need to be undertaken. However, in the interim, direct current voltage gradient investigations can be used to identify integrity threats on the interconnection rather than install the scraper station facilities.[128]

345. The initially proposed capital expenditure for mainline valve and scraper stations for AA3 was mainly for one project, the installation of scraper station facilities at the Apache-GGP interconnection ($0.098 million). GGT advised that the project was delivered for less than the amount included for this project in the AA3 final decision capital expenditure forecast due to some essential parts being sourced from another site.[129]

[128] Goldfields Gas Transmission Pty Ltd, 19 March 2019, *Response to information request EMCa 22.*

[129] Goldfields Gas Transmission Pty Ltd, 19 March 2019, *Response to information request EMCa 22.*

346. The conforming capital expenditure initially proposed for the Apache-GGP pipeline interconnection for AA3 was less than the AA3 final decision forecast amount, while the work covered by this capital expenditure was not significantly different from the original scope. The ERA therefore considered that the conforming capital expenditure proposed for the Apache-GGP pipeline interconnection was consistent with the cost that would be incurred by a prudent service provider acting efficiently as required by rule 79(1) of the NGR. The ERA considered the work covered by the Apache-GGP pipeline interconnection project was in accordance with good industry practice.[130] The ERA therefore concluded that the Apache-GGP pipeline interconnection project satisfied rule 79(1)(a) of the NGR.

347. The ERA concluded that the Apache-GGP pipeline interconnection project mainline in-line inspection project was justifiable because it covered capital expenditure necessary to maintain and improve the safety of services, to maintain the integrity of services and to comply with a regulatory obligation or requirement.[131] These are justifiable grounds for capital expenditure under rules 79(2)(c)(i), 79(2)(c)(ii) and 79(2)(c)(iii) of the NGR. The ERA therefore concluded that the Apache-GGP pipeline interconnection project satisfied rule 79(1)(b) of the NGR.

348. The proposed capital expenditure for mainline valve and scraper stations for AA3 also included $0.012 million for the Leonora offtake battery upgrade. Capital expenditure of $0.033 million for this project was included in the AA3 final decision capital expenditure forecast within the receipt and delivery points asset class.

349. The conforming capital expenditure initially proposed for the Leonora offtake battery upgrade was less than the AA3 final decision forecast amount, and the work covered by this capital expenditure was not significantly different from the original scope. On this basis the ERA considered that the proposed conforming capital expenditure for this project would be incurred by a prudent service provider acting efficiently as required by rule 79(1) of the NGR. The ERA considered that the work covered by the Leonora offtake battery upgrade was in accordance with good industry practice.[132] Based on the preceding, the ERA concluded that the Leonora offtake battery upgrade satisfied rule 79(1)(a) of the NGR.

350. The ERA maintained its view from the AA3 final decision that there was a business need for the Leonora offtake battery upgrade in order to maintain the integrity of the services and concluded that this project was therefore justifiable capital expenditure under rule 79(2)(c)(ii) of the NGR.[133]

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130 The ERA's conclusion was supported by EMCa's technical opinion that the capital expenditure projects in the mainline valve and scraper stations asset class proposed as conforming capital expenditure were likely to satisfy the capital expenditure criteria. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 140.

131 The advice provided by EMCa as technical advisor for the AA3 final decision supported that the Apache-GGP pipeline interconnection project was necessary to maintain and improve the safety of services, to maintain the integrity of services and to comply with a regulatory obligation or requirement. Energy Market Consulting Associates, December 2015, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 154.

132 The ERA's conclusion was supported by EMCa's technical opinion that the capital expenditure projects in the receipt and delivery points asset class proposed as conforming capital expenditure, including the Leonora offtake battery upgrade, were likely to satisfy the capital expenditure criteria. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 140.

133 ERA, 21 July 2016, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, paragraph 628.

351. The ERA was satisfied that the capital expenditure amounts allocated to the covered pipeline for the Apache-GGP pipeline interconnection project and the Leonora offtake battery upgrade were allocated according to the cost allocation method set out in the AA3 final decision and therefore were properly allocated as required by rule 79(6) of the NGR.

352. Given that the Apache-GGP pipeline interconnection project and the Leonora offtake battery upgrade satisfied the criteria for conforming capital expenditure set out in rule 79(1) of the NGR, the proposed capital expenditure for these projects was included in the regulatory asset base for AA3 in the draft decision.

353. The conforming capital expenditure included in the capital base for AA3 for mainline valve and scraper stations in the draft decision is shown in Table 29.

Table 29 ERA draft decision conforming capital expenditure for mainline valve and scraper station asset class (AA3) ($ million nominal)

Project/Work item	2015	2016	2017	2018	2019	AA3 total
Leonora offtake battery upgrade	0.012	-	-	-	-	0.012
Install scraper station facilities on Apache interconnect pipeline	0.098	0.001	-	-	-	0.099
Total conforming AA3 capital expenditure – Mainline valve and scraper stations	**0.110**	**0.001**	**-**	**-**	**-**	**0.111**

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 64, Table 20.

Compressor stations

354. As shown in Table 26, GGT initially proposed $2.496 million of capital expenditure within the compressor stations asset class for the AA3 period. This was $0.406 million more than the capital expenditure for the compressor stations asset class included in the AA3 final decision capital expenditure forecast.

355. The ERA determined in the draft decision that $2.196 million of capital expenditure for compressor station assets during AA3 was conforming capital expenditure.

356. GGT proposed to include $0.453 million of capital expenditure for four compressor station programmable logic controller upgrades that were included in the AA3 final decision capital expenditure forecast and which it pursued as a combined project.[134] The total amount included in the AA3 final decision forecast for these upgrades was $0.265 million combined.

357. In the draft decision the ERA maintained its view from the AA3 final decision that the four compressor station programmable logic controller upgrade projects were in accordance with good industry practice, as required by rule 79(1)(a) of the NGR, and that these projects were necessary to maintain the integrity of services and therefore

[134] These are the Yarraloola unit programmable logic controller backplane upgrade, Ilgarari unit programmable logic controller backplane upgrade, Yarraloola gas engine alternator unit programmable logic controller upgrade and Ilgarari gas engine alternator unit programmable logic controller upgrade.

satisfied rule 79(1)(b) of the NGR.[135] However, GGT did not supply an explanation when requested for the cost overrun on these projects. As a result, the ERA was not satisfied that the amount of proposed capital expenditure for these projects would be incurred by a prudent service provider acting efficiently, as required by rule 79(1)(a) of the NGR.[136] The amount of proposed capital expenditure in excess of the AA3 final decision combined capital expenditure forecast for the programmable logic controller upgrade projects ($0.188 million) was therefore not included in the AA3 regulatory asset base in the draft decision. The ERA noted in the draft decision that, in the absence of additional information, it considered that the AA3 final decision capital expenditure forecast for the projects is the best estimate of the capital expenditure for the projects that would be incurred by a prudent service provider acting efficiently.[137]

358. GGT proposed to include $0.111 million of capital expenditure for a project that was not included in the AA3 final decision capital expenditure forecast – the Krausz aftercooler upgrade. GGT did not supply an explanation for this expenditure and therefore the ERA had no basis for determining that these costs satisfied the criteria for conforming capital expenditure set out under rule 79 of the NGR. These costs were therefore not included in the AA3 regulatory asset base.

359. GGT initially proposed $0.127 million of conforming capital expenditure for AA3 for the Yarraloola and Ilgarari lighting towers replacement. The conforming capital expenditure proposed for the lighting towers replacements was slightly less than the AA3 final decision forecast amount for this work ($0.143 million), while the work covered by this capital expenditure was not significantly different from the original scope. The ERA therefore considered that the proposed conforming capital expenditure was in line with what would be incurred by a prudent service provider acting efficiently as required by rule 79(1)(a) of the NGR. The ERA maintained its view from the AA3 final decision that the lighting towers replacements were in accordance with good industry practice, as is also required by rule 79(1)(a) of the NGR, and were justifiable capital expenditure as they were required in order to maintain and improve the safety of the services and therefore satisfied rule 79(1)(b) of the NGR.[138] This was supported by EMCa's technical advice that the lighting

135 ERA, 21 July 2016, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, paragraphs 622 and 644. The ERA's view was based on a review of background information on the Yarraloola and Ilgarari unit programmable logic controller backplane upgrades and the advice provided by EMCa as technical advisor for the AA3 final decision that there was a business need for the Yarraloola and Ilgarari gas engine alternator unit programmable logic controller upgrades. Energy Market Consulting Associates, December 2015, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 154.

136 Information request EMCa 22 asked for an explanation of the drivers of expenditure variance for all projects that were forecast to be undertaken in the AA3 period.

137 GGT also proposed to include some capital expenditure for the Yarraloola gas engine alternator programmable logic controller upgrade, Ilgarari gas engine alternator programmable logic controller upgrade and Ilgarari unit backplane upgrade projects in the SCADA, communications and electronic equipment asset class. These components of the initial proposed capital expenditure and the ERA's draft decision conclusions on these are outlined in paragraphs 388 to 390.

138 ERA, 21 July 2016, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, paragraph 626. The advice provided by EMCa as technical advisor for the AA3 final decision supported that the lighting towers replacements were justifiable to maintain and improve the safety of the services, which is a ground for capital expenditure under rule 79(2)(c)(i) of the NGR. Energy Market Consulting Associates, December 2014, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 154.

towers replacements were likely to satisfy the conforming capital expenditure criteria.[139]

360. GGT initially proposed $0.180 million of conforming capital expenditure for AA3 for the Paraburdoo unit 1 turbine exchange work. This was significantly below the amount for this work included in the AA3 final decision capital expenditure forecast ($0.503 million). GGT advised that the underspend was due to the unit not reaching the necessary number of hours in service for the work to be required.[140] The ERA was satisfied that the Paraburdoo unit 1 turbine exchange work undertaken during AA3, being significantly less than the AA3 final decision forecast amount, would be incurred by a service provider acting efficiently. The ERA maintained its view from the AA3 final decision that the Paraburdoo unit 1 turbine exchange work was in accordance with good industry practice, as is also required by rule 79(1)(a) of the NGR, and was justifiable capital expenditure as it was necessary to maintain and improve the integrity of the services and therefore satisfied rule 79(1)(b) of the NGR.[141] This was supported by EMCa's technical advice that the Paraburdoo unit 1 turbine exchange work was likely to satisfy the conforming capital expenditure criteria.[142]

361. GGT initially proposed to include $1.216 million conforming capital expenditure for the Wiluna compressor controls upgrade in the AA4 opening capital base. This was a project that was not included in the AA3 final decision capital expenditure forecast. GGT provided information which stated that this project was carried out due to obsolescence of the compressor control system at Wiluna, which was commissioned in May 2000. The cards which carried the control system electronics were no longer being manufactured and GGT's interim solution, which was to extend the life of the system by replacing defective cards with second-hand cards, had become unsustainable as second-hand cards were no longer available. GGT advised it was therefore necessary to replace the control system to keep the Wiluna compressor station in operation. GGT stated that failure to replace the control system would have resulted in failure of the compressor, with adverse consequences for the reliability and safety of gas transportation service on the GGP.[143]

362. Based on the explanation supplied by GGT and technical advice received, the ERA concluded that the capital expenditure for the Wiluna compressor controls upgrade was necessary to maintain the safety of services and to maintain the integrity of services and was therefore justifiable capital expenditure according to rule 79(1)(b) of the NGR.[144] Based on the explanation supplied by GGT and the technical advice

139 Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 140.

140 Goldfields Gas Transmission Pty Ltd, 19 March 2019, *Response to information request EMCa 22.*

141 ERA, 21 July 2016, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, paragraph 621. The advice provided by EMCa as technical advisor for the AA3 final decision supported that the Paraburdoo unit 1 turbine exchange work was necessary to maintain the integrity of the services, which is a ground for capital expenditure under rule 79(2)(c)(i) of the NGR. Energy Market Consulting Associates, December 2015, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 154.

142 Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 140.

143 Goldfields Gas Transmission Pty Ltd, 21 December 2018, *Access Arrangement Revision Proposal Supporting Information (Public Version)*, p. 30.

144 EMCa's advice was that GGT's explanation of the need for the Wiluna compressor controls upgrade was reasonable. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 139.

received, the ERA concluded that the capital expenditure for the Wiluna compressor controls upgrade would be incurred by a prudent service provider acting efficiently and in accordance with good industry practice, and therefore satisfied rule 79(1)(a) of the NGR.[145]

363. GGT initially proposed to include $0.315 million of capital expenditure for the site accommodation upgrade program in the AA4 opening capital base. This was a project that was not included in the AA3 final decision capital expenditure forecast. The proposed capital expenditure for the site accommodation upgrade program in AA4 (discussed in paragraphs 527 to 533) is a continuation of the site accommodation upgrade work carried out during AA3. GGT stated that the upgrade program was necessitated by an enterprise bargaining agreement which required GGT to provide site accommodation which fulfilled certain specifications. GGT considered that the work undertaken during AA3 was justifiable to maintain and improve the safety and integrity of pipeline services.[146]

364. Based on GGT's explanation and the technical advice received, the ERA concluded that the capital expenditure for the site accommodation program was necessary to maintain and improve the safety and integrity of the services and was therefore justifiable capital expenditure according to rule 79(1)(b) of the NGR.[147] Based on the explanation supplied by GGT and the technical advice received, the ERA concluded that the proposed AA3 conforming capital expenditure for the site accommodation upgrade would be incurred by a prudent service provider acting efficiently and in accordance with good industry practice, and therefore satisfied rule 79(1)(a) of the NGR.

365. As shown in Table 30, GGT's proposed conforming capital expenditure also included smaller amounts for other minor items, each of which was below $0.05 million for the period.[148] These items were not included in the AA3 final decision capital expenditure forecast. GGT described the largest three of these items as follows:[149]

- Wiluna compressor station 40,000 hour upgrade – This turbine unit reached the requisite number of hours for overhaul during AA3 ahead of expectations and so overhaul of this unit was brought forward and performed during AA3.
- Yarraloola compressor station power management scope of work – Work was carried out to enable verification of the capability to meet the power demands at Yarraloola compressor station.

145 EMCa's advice was that, based on its experience, the incurred capital expenditure for the Wiluna compressor controls upgrade was reasonable. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 139.

146 Goldfields Gas Transmission Pty Ltd, *21 December 2018, Access Arrangement Revision Proposal Supporting Information (Public Version)*, p. 33 and 46.

147 EMCa's opinion was that the site accommodation upgrade capital expenditure was likely to satisfy the criteria for conforming capital expenditure. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 145.

148 These are the Yarraloola load bank installation, Yarraloola compressor station power management Scope of Work, Programmable Logic Controller Support Software-Service & Upgrade+2012 Phase 2+I&E Prog Software and Wiluna Compressor Station 40,000 hour Upgrade.

149 GGT did not supply an explanation for the proposed capital expenditure for Programmable Logic Controller Support Software-Service & Upgrade+2012 Phase 2+I&E Prog Software, for which it incurred $1,204 of capital expenditure during AA3.

- Yarraloola load bank installation – This project comprised low value work under a purchase order.[150]

366. Based on the information supplied by GGT on the Yarraloola load bank installation, Yarraloola compressor station power management scope of work, Programmable Logic Controller Support Software-Service & Upgrade+2012 Phase 2+I&E Program software and Wiluna Compressor Station 40,000 hour Upgrade and the technical advice received, the ERA concluded that the capital expenditure for these items was necessary to maintain the integrity of the services and was, therefore, justifiable capital expenditure according to rule 79(1)(b) of the NGR.[151] As stated in paragraph 319, the ERA's review of GGT's investment management processes concluded that these are consistent with common industry practice for businesses of similar complexity and similar levels of capital expenditure. This conclusion was based on technical advice from EMCa which included, among other advice, that GGT's processes for reporting and monitoring small variations in small expenditure items were adequate. Based on GGT's explanations, the technical advice received, and the ERA's conclusions regarding GGT's investment management and governance practices, the ERA concluded that the proposed AA3 conforming capital expenditure for these four smaller items would be incurred by a prudent service provider acting efficiently and in accordance with good industry practice, and therefore satisfied rule 79(1)(a) of the NGR.

367. The conforming capital expenditure included in the capital base for AA3 compressor station assets is shown in Table 30 below. The ERA was satisfied that the amount of the expenditure allocated to the covered pipeline for each of these items was allocated according to the cost allocation method set out in the AA3 final decision and therefore was properly allocated as required by rule 79(6) of the NGR and satisfied the criteria for conforming capital expenditure set out by rule 79(1). GGT subtracted $0.017 million from its proposed 2015 conforming capital expenditure for the GGT reference meter upgrade. The draft decision conforming capital expenditure also subtracted this amount as Table 30 shows.

150 Goldfields Gas Transmission Pty Ltd, 19 March 2019, *Response to information request EMCa 22.*

151 EMCa's opinion was that the Yarraloola load bank installation and the Yarraloola compressor station power management Scope of Work were likely to satisfy the criteria for conforming capital expenditure. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement.*

Table 30 ERA draft decision conforming capital expenditure for compressor stations asset class (AA3) ($ million nominal)

Project/Work item	2015	2016	2017	2018	2019	AA3 total
Compressor station Programmable Logic Controller upgrades	-	-	-	-	0.265	0.265
Yarraloola and Ilgarari lighting towers replacement	-	-	-	-	0.127	0.127
Paraburdoo unit 1 turbine exchange (major servicing)	-	-	-	-	0.180	0.180
Krausz aftercooler upgrade	-	-	-	-	-	-
Site accommodation upgrade programme	-	-	-	-	0.315	0.315
GGT reference meter upgrade	(0.017)	-	-	-	-	(0.017)
Yarraloola load bank installation	-	-	0.009	0.014	-	0.024
Wiluna compressor controls upgrade	-	-	0.914	0.302	-	1.216
Yarraloola compressor station power management Scope of Work	-	-	-	0.011	0.033	0.043
Programmable Logic Controller Support Software-Service & Upgrade+2012 Phase 2+I&E Prog Software	0.001	-	-	-	-	0.001
Wiluna Compressor Station 40,000 hour Upgrade	-	-	0.042	-	-	0.042
Total conforming AA3 capital expenditure - Compressor control	**(0.016)**	**0.000**	**0.966**	**0.327**	**0.920**	**2.196**

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 69, Table 21.

Receipt and delivery points

368. As shown in Table 26, GGT initially proposed $0.331 million of capital expenditure within the receipt and delivery points asset class for the AA3 period. This was $0.703 million less than the capital expenditure for the receipt and delivery points asset class included in the AA3 final decision capital expenditure forecast.

369. The ERA determined that $0.331 million of capital expenditure for receipt and delivery points assets during AA3 was conforming capital expenditure.

370. The AA3 final decision included forecast capital expenditure for 10 projects within the receipt and delivery points asset class.

371. GGT's proposed capital expenditure for the receipt and delivery points asset class did not include capital costs for four projects included in the AA3 final decision capital expenditure forecast.[152] These were the hydrocarbon dewpoint monitoring, Leonora

[152] Goldfields Gas Transmission Pty Ltd, 19 March 2019, *Response to information request EMCa 22.*

offtake battery upgrade, DBNGP-GGP interconnect C9 gas chromatograph and Apache-GGP interconnect C9 gas chromatograph.

372. GGT advised that the hydrocarbon dewpoint monitoring would not be undertaken within AA3 as no liquids-related issues have arisen at the GGP receipt points. GGT advised that the work for the DBNGP-GGP interconnect C9 gas chromatograph and Apache-GGP interconnect C9 gas chromatographs were to be carried out in association with a larger study for which delivery requirements were yet to be fully determined.[153] The regulatory asset base for AA3, therefore, did not include any conforming capital expenditure for these four projects.

373. As stated in paragraph 336, the AA3 final decision capital expenditure forecast included six separately identified projects for flow computer upgrades.[154] GGT upgraded the Leonora offtake and Murrin Murrin flow computers during AA3, however, it identified that the latter was attributable to the Eastern Goldfields pipeline and therefore the proposed capital expenditure does not include costs for this flow computer. GGT also upgraded two additional flow computers, at Kalgoorlie south and Jundee, which were not included in the AA3 final decision capital expenditure forecast and it proposed to include these in the regulatory asset base for AA3.

374. GGT included the proposed capital expenditure for the three flow computers upgraded during AA3 within the pipeline and laterals, receipt and delivery points and SCADA, communications and electronic equipment asset classes. The ERA evaluated the efficiency of the proposed capital expenditure for the three flow computers as a combined amount for the draft decision.

375. As stated in paragraph 340, based on the explanation supplied by GGT and the technical advice received, the ERA considered that the capital expenditure for the three flow computers that were upgraded during AA3 that was allocated to the covered pipeline was necessary to maintain and improve the safety and integrity of the services and was, therefore, justifiable capital expenditure according to rule 79(1)(b) of the NGR.[155] The ERA also considered that the proposed capital expenditure for the flow computers was consistent with an amount that would be incurred by a service provider acting efficiently and consistently with good industry practice and therefore satisfied rule 79(1)(a) of the NGR. This included the $0.147 million of capital expenditure included within the receipt and delivery points asset class.

376. GGT proposed $0.167 million capital expenditure for four projects for the GGP's Newman facilities that were not previously considered or included as part of the AA3 final decision capital expenditure forecast.[156] These projects covered work related to replacement of an obsolete flow computer on the site and other smaller work items.

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153 Goldfields Gas Transmission Pty Ltd, 19 March 2019, *Response to information request EMCa 22.* GGT did not supply an explanation for why it did not expect to have incurred capital expenditure for the Leonora offtake battery upgrade during AA3.

154 These are the Leonora offtake flow computer upgrade, Murrin Murrin inlet flow computer upgrade, Paraburdoo flow computer 1 (fuel gas) upgrade, Ilgarari flow computer 1 (fuel gas) upgrade, Wiluna flow computer 1 (fuel gas) upgrade and Jeedamya scraper station flow computer 1 upgrade.

155 EMCa's opinion was that the proposed receipt and delivery points capital expenditure was likely to satisfy the criteria for conforming capital expenditure. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 150.

156 These projects were the Newman FC Install, Newman reference run USM install, Newman maintenance base crossover replacement and Newman gas lateral CPU relocation.

377. Based on the explanations supplied by GGT for the four receipt and delivery point projects for the GGP's Newman facilities and the technical advice received, the ERA concluded that the capital expenditure for these items was necessary to maintain the integrity of the services and was, therefore, justifiable capital expenditure according to rule 79(1)(b) of the NGR.[157] Based on the explanations supplied by GGT and the technical advice received, the ERA concluded that the proposed AA3 conforming capital expenditure for these items would be incurred by a prudent service provider acting efficiently and in accordance with good industry practice, and therefore satisfied rule 79(1)(a) of the NGR.

378. GGT also proposed conforming capital expenditure for smaller amounts for four other work items, which when combined total less than $0.020 million as shown in Table 31 below.[158] As stated in paragraph 319, the ERA's review of GGT's investment management processes concluded that these were consistent with common industry practice for businesses of similar complexity and similar levels of capital expenditure. This conclusion was based on technical advice from EMCa which included, among other advice, that GGT's processes for reporting and monitoring small variations in small expenditure items were adequate. Based on the explanations supplied by GGT for these four smaller items, the ERA's conclusions on GGT's investment management and governances processes and the technical advice received, the ERA concluded that the capital expenditure for these items was necessary to maintain the integrity of the services and was therefore justifiable capital expenditure according to rule 79(1)(b) of the NGR.[159] Further, the proposed AA3 conforming capital expenditure for these items would be incurred by a prudent service provider acting efficiently and in accordance with good industry practice, and therefore satisfied rule 79(1)(a) of the NGR.

379. The ERA was satisfied that the expenditure GGT proposed to allocate to the covered pipeline for the receipt and delivery points projects was allocated according to the cost allocation method set out in the AA3 final decision and therefore properly allocated as required by rule 79(6) of the NGR. As outlined in paragraphs 373 to 378, the ERA concluded that all of the projects comprising the proposed AA3 conforming capital expenditure for the receipt and delivery points asset class satisfied rules 79(1)(a) and 79(1)(b) of the NGR. Therefore, the ERA concluded that all the proposed AA3 conforming capital expenditure for the receipt and delivery points asset class satisfied the criteria for conforming capital expenditure under rule 79(1) of the NGR. The proposed $0.331 million for the receipt and delivery points asset class was therefore included in the regulatory asset base for AA3.

380. The conforming capital expenditure included in the capital base for AA3 for receipt and delivery points assets in the draft decision is shown in Table 31.

157 EMCa's opinion was that the Newman facilities projects were likely to satisfy the criteria for conforming capital expenditure. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 150.

158 Murrin inlet flow computer upgrade, Murrin offtake station upgrade, Thunderbox offtake Programmable Logic Controller upgrade and Jundee flow control upgrade.

159 EMCa's opinion was that all the proposed receipt and delivery points capital expenditure was likely to satisfy the criteria for conforming capital expenditure. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 150.

Table 31 ERA draft decision conforming capital expenditure for receipt and delivery point asset class (AA3) ($ million nominal)

Project/Work item	2015	2016	2017	2018	2019	AA3 total
Flow computer upgrades (Leonora, Kalgoorlie South, Jundee)	-	-	-	0.147	0.000	0.147
Newman FC install	-	-	-	0.018	0.055	0.073
Newman reference run USM install	-	-	-	0.018	0.055	0.073
Newman maintenance base crossover replacement	-	-	-	0.003	0.008	0.010
Newman gas lateral CPU relocation	-	-	-	0.003	0.008	0.010
Murrin inlet flow computer upgrade	0.090	-0.089	-	-	-	0.000
Murrin offtake station upgrade	0.307	-0.306	-	-	-	0.001
Thunderbox offtake Programmable Logic Controller upgrade	0.015	-	-	-	-	0.015
Jundee flow control upgrade	-	-	0.001	-	-	0.001
Total conforming AA3 capital expenditure - Receipt & delivery points	**0.412**	**-0.395**	**0.001**	**0.188**	**0.126**	**0.331**

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 72, Table 22.

SCADA, communications and electronic equipment

381. As shown in Table 26, GGT proposed $2.135 million of capital expenditure within the SCADA, communications and electronic equipment asset class for the AA3 period. This was $1.619 million more than the capital expenditure for the SCADA, communications and electronic equipment asset class included in the AA3 final decision capital expenditure forecast.

382. The ERA determined that $2.056 million of capital expenditure for SCADA, communications and electronic equipment assets during AA3 was conforming capital expenditure.

383. The capital expenditure included in the forecast in the AA3 final decision covered 18 work items. GGT's proposed AA3 conforming capital expenditure comprised mainly costs for one of these projects, the national satellite SCADA project, and small additional projects not included in the AA3 final decision capital expenditure forecast.

384. The AA3 final decision forecast included $0.201 million for the national satellite SCADA project. GGT proposed to include $1.887 million for this project in the AA3 regulatory asset base, which equated to an excess of $1.686 million above the AA3 forecast costs. GGT advised that these costs were for upgrades to the GGP's IT and communications equipment needed because the vendor for the system stopped supporting the software and satellites. As a result, the operational control of the GGP's SCADA system was moved to the APA Group's platform.

385. The ERA's technical advisor EMCa stated that, due to the critical nature of SCADA systems to pipeline operations, the SCADA services obtained as a result of the national satellite SCADA project needed to be retained.[160]

386. Based on GGT's explanation for the overspend on the national satellite SCADA project, and the technical advice received, the ERA concluded that the capital expenditure for this project conformed with rule 79(1)(b) of the NGR as it was necessary to maintain the integrity of the pipeline services, which is a ground for justification of capital expenditure under rule 79(2)(c)(ii) of the NGR. Based on review of GGT's explanation for the expenditure and the technical advice received from EMCa, the ERA was satisfied that the work covered by this expenditure would be incurred by a prudent service provider acting efficiently and in accordance with good industry practice and that the capital expenditure therefore satisfied rule 79(1)(a) of the NGR.[161]

387. As shown in Table 32, other than the national satellite SCADA project, GGT's proposed conforming capital expenditure also included smaller amounts for other minor items within the SCADA, communications and electronic equipment asset class, each of which was below $0.100 million for the period.

388. GGT included the following projects as part of its proposed capital expenditure for the SCADA, communications and electronic equipment asset class which were included in the AA3 final decision capital expenditure forecast under other asset classes:

- Yarraloola gas engine alternator Programmable Logic Controller upgrade, which was included in the AA3 final decision capital expenditure forecast within the compressor stations asset class.
- Ilgarari gas engine alternator Programmable Logic Controller upgrade, which was included in the AA3 final decision capital expenditure forecast within the compressor stations asset class.
- Ilgarari unit backplane upgrade, which was included in the AA3 final decision capital expenditure forecast within the compressor stations asset class.
- Leonora offtake flow computer, which was included in the AA3 final decision capital expenditure forecast within the receipt and delivery point facilities asset class.

389. GGT explained that the proposed capital expenditure for the assets listed in paragraph 388 above was allocated to more than one asset class because, in operation, these assets interacted with more than one part of the transmission pipeline. For example, the flow computers measure the energy flows at receipt and delivery points and are, therefore, receipt and delivery points facilities. The communication of data to and from the flow computers occurs through the GGP's SCADA system. Part of the receipt and delivery point facilities are the electronic devices which provide communication with the SCADA system and therefore part of the capital expenditure for these assets can be allocated to the SCADA, communications and electronic equipment asset class.[162]

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160 Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 148.

161 Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 148.

162 Goldfields Gas Transmission Pty Ltd, 16 July 2019, *Response to information request EMCa 6.*

390. As stated at paragraph 357, the ERA maintained its view from the AA3 final decision that the Yarraloola gas engine alternator Programmable Logic Controller upgrade, Ilgarari gas engine alternator Programmable Logic Controller upgrade and Ilgarari unit backplane upgrade projects were in accordance with good industry practice, as required by rule 79(1)(a) of the NGR, and that these projects were necessary to maintain the integrity of services and therefore satisfied rule 79(1)(b) of the NGR. GGT did not supply an explanation when requested for the cost overrun on these projects. Based on the information reviewed, the ERA considered that the AA3 final decision capital expenditure forecast for these projects was the best estimate of the capital expenditure for these projects that would be incurred by a prudent service provider acting efficiently, as required by rule 79(1)(c). The proposed capital expenditure in excess of the AA3 final decision combined capital expenditure forecast for these projects was therefore excluded from the AA3 regulatory asset base in the draft decision, including the proposed capital expenditure within the SCADA, communications and electronic equipment asset class for these projects. This includes $0.023 million of proposed capital expenditure for the Yarraloola gas engine alternator Programmable Logic Controller upgrade, $0.017 million of proposed capital expenditure for the Ilgarari gas engine alternator Programmable Logic Controller upgrade and $0.039 million of proposed capital expenditure for the Ilgarari unit backplane upgrade.

391. As stated at paragraphs 336 and 374, GGT included the proposed capital expenditure for the three flow computers upgraded during AA3 within the pipeline and laterals, receipt and delivery points and SCADA, communications and electronic equipment asset classes. The ERA evaluated the efficiency of the proposed capital expenditure for the three flow computers as a combined amount for the draft decision.

392. As stated at paragraphs 340 and 375, based on the explanation supplied by GGT and the technical advice received, the ERA considered that the capital expenditure for the three flow computers that were upgraded during AA3 and that was allocated to the covered pipeline was necessary to maintain and improve the safety and integrity of the services and was, therefore, justifiable capital expenditure according to rule 79(1)(b) of the NGR.[163] The ERA also considered that the proposed capital expenditure for the flow computers was consistent with an amount that would be incurred by a service provider acting efficiently and consistently with good industry practice and therefore satisfied rule 79(1)(a) of the NGR. This included the $0.099 million of proposed capital expenditure for the Leonora offtake flow computer included within the SCADA, communications and electronic equipment asset class.

393. GGT included the following projects as part of its proposed capital expenditure for the SCADA, communications and electronic equipment asset class which were not included in the AA3 final decision capital expenditure forecast:

- SCADAPack software ($0.004 million)
- Yarraloola DNP3 computer ($0.067 million)

394. The ERA considered that the proposed capital expenditure items identified in paragraph 393 were of such a nature that the capital expenditure was justifiable to maintain the integrity of the services, which is a justifiable ground for capital expenditure under rule 79(2)(c)(ii) of the NGR. These items therefore satisfied rule 79(1)(b) of the NGR. As stated at paragraph 319, the ERA's review of GGT's

[163] EMCa's opinion was that the proposed receipt and delivery points capital expenditure was likely to satisfy the criteria for conforming capital expenditure. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 150.

investment management processes concluded that these are consistent with common industry practice for businesses of similar complexity and similar levels of capital expenditure. This conclusion was based on technical advice from EMCa which included, among other advice, that GGT's processes for reporting and monitoring small variations in small expenditure items were adequate. The ERA was therefore satisfied that the capital expenditure proposed for the SCADAPack software and Yarraloola DNP3 computer would be incurred by a service provider acting efficiently and in accordance with good industry practice. The capital expenditure for these items, therefore, satisfied rule 79(1)(a) of the NGR.

395. The ERA was satisfied that the capital expenditure GGT proposed to allocate to the covered pipeline for the SCADA, communications and electronic equipment asset class was allocated according to the cost allocation method set out in the AA3 final decision and therefore properly allocated as required by rule 79(6) of the NGR. As outlined in paragraphs 386 to 393, the ERA concluded that $2.056 million of the proposed AA3 conforming capital expenditure for the SCADA, communications and electronic equipment asset class satisfied rules 79(1)(a) and 79(1)(b) of the NGR. Therefore, the ERA concluded that $2.056 million of the proposed AA3 conforming capital expenditure for the SCADA, communications and electronic equipment asset class satisfied the criteria for conforming capital expenditure under rule 79(1) of the NGR and included this amount in the regulatory asset base for AA3.

396. The conforming capital expenditure included in the capital base for AA3 for the SCADA, communications and electronic equipment assets in the draft decision is shown in Table 32.

Table 32 ERA draft decision conforming capital expenditure for SCADA, communications and electronic equipment asset class (AA3) ($ million nominal)

Project/Work item	2015	2016	2017	2018	2019	AA3 total
Yarraloola gas engine alternator Programmable Logic Controller upgrade	-	-	-	-	-	-
Ilgarari gas engine alternator Programmable Logic Controller upgrade	-	-	-	-	-	-
Leonora offtake flow computer	0.093	0.005	0.001	-	-	0.099
Ilgarari unit backplane upgrade	-	-	-	-	-	-
SCADAPack Software	0.004	-	-	-	-	0.004
Yarraloola DNP3 Convertor	-	0.067	-	-	-	0.067
National satellite SCADA project	0.795	0.917	0.064	0.110	-	1.887
Total conforming AA3 capital expenditure – SCADA, communications and electronic equipment	**0.892**	**0.990**	**0.065**	**0.110**	**-**	**2.056**

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 75, Table 23.

Cathodic protection

397. As shown in Table 26, GGT initially proposed $0.075 million of capital expenditure within the cathodic protection asset class for AA3. This was $0.168 million less than the capital expenditure for the cathodic protection equipment class included in the AA3 final decision capital expenditure forecast.

398. The ERA determined that $0.075 million of capital expenditure for cathodic protection assets during AA3 was conforming capital expenditure.

399. The AA3 final decision included forecast capital expenditure for four projects within the cathodic protection asset class. GGT expected to have incurred costs allocable to the covered pipeline for one of these projects, cathodic protection power supply replacements, within AA3.

400. The cathodic protection power supply replacements were carried out during AA3 for $0.075 million. GGT advised that the actual costs for this work exceeded the amount included in the AA3 final decision capital expenditure forecast due to the need to avoid power supply failure to the corrosion protection. While the proposed conforming capital expenditure for the cathodic protection power supply replacements exceeded the amount included in the AA3 final decision capital expenditure forecast, the variance ($0.017 million) is relatively small. The ERA concluded that the total amount incurred, being close to the final decision forecast, would be incurred by a prudent service provider acting efficiently. The ERA considered that carrying out the cathodic protection power supply replacements during AA3 was consistent with good industry practice.[164] The ERA therefore

[164] This conclusion was supported by EMCa's opinion, which was that all the cathodic protection power supply replacements were likely to satisfy the criteria for conforming capital expenditure. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 161.

concluded that the cathodic protection power supply replacements satisfied rule 79(1)(a) of the NGR.

401. The ERA considered that the cathodic protection power supply replacements were justifiable to maintain the integrity of services, which is a justifiable ground for capital expenditure under rule 79(2)(c)(i) of the NGR. The cathodic protection power supply replacements capital expenditure, therefore, satisfied rule 79(1)(b) of the NGR.

402. The ERA was satisfied that the amount of the expenditure GGT proposed to allocate to the covered pipeline for the cathodic protection power supply replacements had been allocated according to the cost allocation method set out in the AA3 final decision and, therefore, was properly allocated as required by rule 79(6) of the NGR.

403. Given that the cathodic protection power supply replacement work satisfied the criteria for conforming capital expenditure set out in rule 79(1) of the NGR, the proposed capital expenditure for this work was included in the regulatory asset base for AA3.

404. GGT advised that it did not expect to undertake any work within AA3 for the three other projects included in the AA3 final decision capital expenditure forecast. These were the cathodic protection telemetry for KP670 project, cathodic protection surge diverter upgrades and cathodic protection insulation joint surge protection upgrade. GGT advised that the first project was relatively low priority work which was deferred and the scope of work for the other two projects decreased as GGT identified during AA3 that major surge protection upgrades were not required. No capital expenditure for the above projects was included in the regulatory asset base for AA3.

405. The conforming capital expenditure included in the capital base for AA3 for cathodic protection assets in the draft decision is shown in Table 33.

Table 33 ERA draft decision conforming capital expenditure for cathodic protection asset class (AA3) ($ million nominal)

Project/Work item	2015	2016	2017	2018	2019	AA3 total
Cathodic protection power supply replacements	-	-	-	-	0.075	0.075
Total conforming AA3 capital expenditure - Cathodic protection	**-**	**-**	**-**	**-**	**0.075**	**0.075**

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 77, Table 24.

Maintenance bases and depots

406. As shown in Table 26, GGT proposed $0.357 million of capital expenditure within the maintenance bases and depots asset class for the AA3 period. This was $0.190 million more than the capital expenditure for the maintenance bases and depots asset class included in the AA3 final decision capital expenditure forecast.

407. The ERA determined that $0.357 million of capital expenditure for the maintenance bases and depots asset class during AA3 was conforming capital expenditure.

408. Within the maintenance bases and depots asset class, the AA3 final decision included $0.275 million of capital expenditure for one project, the ‘Karratha

maintenance base rebuild'. GGT had not incurred any expenditure for the rebuild by the time it submitted its initial proposal but expected to incur $0.275 million for this work by the end of AA3 and included this expected amount as proposed conforming capital expenditure for AA3 in its initial proposal.

409. The conforming capital expenditure proposed for the Karratha maintenance base rebuild for AA3 was the same as the AA3 final decision forecast amount, while the scope of the work was unchanged from the original scope. The ERA, therefore, considered that the conforming capital expenditure proposed for the Karratha maintenance base rebuild for AA3 would be incurred by a prudent service provider acting efficiently as required by rule 79(1) of the NGR. The ERA considered the work covered by the Karratha maintenance base rebuild was in accordance with good industry practice.[165] The ERA therefore concluded that the proposed Karratha maintenance base rebuild capital expenditure satisfied rule 79(1)(a) of the NGR.

410. The Karratha maintenance base rebuild was justifiable to maintain the integrity of services, which is a justifiable ground for capital expenditure under rule 79(2)(c)(i) of the NGR. The Karratha maintenance base rebuild capital expenditure, therefore, satisfied rule 79(1)(b) of the NGR.

411. GGT sought to include small amounts of capital expenditure totalling $0.072 million in the AA3 regulatory asset base which were not included in the AA3 final decision capital expenditure forecast.[166] GGT advised that these costs were all for work that was unforeseen and therefore not budgeted for previously. These work items were:

- Paraburdoo accommodation upgrade ($0.001 million)
- Newman base vehicle sun protection ($0.015 million)
- Newman base waste oil ($0.020 million)
- Leinster Base workshop recladding ($0.021 million)
- Leonora central accommodation upgrade ($0.014 million).

412. The ERA considered that these five items were of such a nature that the capital expenditure was justifiable to maintain the integrity of the services, which is a justifiable ground for capital expenditure under rule 79(2)(c)(ii) of the NGR. The ERA therefore concluded that these five items satisfied rule 79(1)(b) of the NGR.

413. The ERA was satisfied that these five expenditure items would be incurred by a service provider acting efficiently and in accordance with good industry practice. As stated in paragraph 319, the ERA's review of GGT's investment management processes concluded that these were consistent with common industry practice for businesses of similar complexity and similar levels of capital expenditure. This conclusion was based on technical advice from EMCa which included, among other advice, that GGT's processes for reporting and monitoring small variations in small expenditure items were adequate. The ERA therefore concluded that the capital expenditure for the five expenditure items identified in paragraph 411 satisfied rule 79(1)(a) of the NGR.

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165 This conclusion was supported by EMCa's opinion was that the proposed maintenance bases and depots capital expenditure was likely to satisfy the criteria for conforming capital expenditure. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 164.

166 Nominal dollars.

414. The ERA was satisfied that the expenditure GGT proposed to allocate to the covered pipeline for the Karratha maintenance base rebuild and the five smaller items listed in paragraph 329 were allocated according to the cost allocation method set out in the AA3 final decision and, therefore, were properly allocated as required by rule 79(6) of the NGR.

415. It follows from the conclusions outlined in paragraphs 409 to 414 that all the AA3 capital expenditure proposed by GGT as conforming capital expenditure within the maintenance bases and depots asset class satisfied the criteria for conforming capital expenditure set out at rule 79(1) of the NGR. All the proposed capital expenditure within the maintenance bases and depots asset class was therefore included in the capital base for AA3 in the draft decision.

416. The conforming capital expenditure included in the capital base for AA3 for the maintenance bases and depots asset class in the draft decision is shown in Table 34.[167]

Table 34 ERA draft decision conforming capital expenditure for the maintenance bases and depots asset class (AA3) ($ million nominal)

Project/Work item	2015	2016	2017	2018	2019	AA3 total
Karratha maintenance base	(0.022)	-	-	-	0.297	0.275
Leinster base workshop recladding	-	-	-	0.005	0.016	0.021
Leonora central accommodation upgrade	-	-	-	0.014	-	0.014
Paraburdoo accommodation upgrade	0.001	-	-	-	-	0.001
Newman base vehicle sun protection	0.016	-	-	-	-	0.016
Newman base waste oil storage	0.020	-	-	-	-	0.020
Total conforming AA3 capital expenditure – Maintenance bases and depots	**0.025**	**-**	**-**	**0.019**	**0.313**	**0.357**

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 78, Table 25.

Other depreciable assets

417. As shown in Table 26, GGT proposed $0.858 million of capital expenditure within the other depreciable assets class for the AA3 period. This was $0.237 million more than the capital expenditure for other depreciable assets included in the AA3 final decision capital expenditure forecast.

418. The ERA determined that $0.858 million of capital expenditure for other depreciable assets during AA3 was conforming capital expenditure.

[167] There was a typographical error in this table, which shows that the ERA included $0.001 million of conforming capital expenditure in GGT's regulatory asset base for the Paraburdoo accommodation upgrade in 2015. This value should be $0.011 million. The amount of total maintenance bases and depots conforming capital expenditure, shown as $0.357 million in the draft decision, was nonetheless correct. The correct value for the Paraburdoo accommodation upgrade is shown in the final decision section.

419. The AA3 final decision included forecast capital expenditure for two work items, being minor capital items and enterprise asset management.

420. GGT advised that, although the enterprise asset management system was purchased by APA during AA3, the costs of the system were not allocated in the way originally anticipated. Under the allocation method applied within the APA Group, none of the costs of the system were allocated to the GGP. GGT therefore did not propose to include any costs for the system in its AA3 regulatory asset base and the ERA likewise did not include any in the draft decision.

421. The AA3 final decision included forecast capital expenditure for minor capital items of $0.086 million. GGT proposed to include $0.133 million in the AA3 regulatory asset base for capital expenditure for miscellaneous capital items such as signage, tools and gas detectors. Additionally, GGT proposed to include small amounts of conforming capital expenditure for seven other separately identified items within the other depreciable assets asset class including

- SSIR – GGP upgrade ($0.025 million)[168]
- On-line SIM ($0.032 million)[169]
- Newman maintenance base concrete cross overs ($0.024 million)
- replacement lighting towers ($0.039 million)
- Yarraloola unit Programmable Logic Controller back plane ($0.015 million)
- direct current voltage gradient survey ($0.004 million)
- miscellaneous capital financial year 2018 ($0.017 million).

422. The ERA considered that the proposed capital expenditure items identified at paragraph 421 were of such a nature that the capital expenditure was justifiable to maintain the integrity of the services, which is a justifiable ground for capital expenditure under rule 79(2)(c)(ii) of the NGR. These items therefore satisfied rule 79(1)(b) of the NGR. As stated at paragraph 319, the ERA's review of GGT's investment management processes concluded that these were consistent with common industry practice for businesses of similar complexity and similar levels of capital expenditure. This conclusion was informed by technical advice from EMCa which included, among other advice, that GGT's processes for reporting and monitoring small variations in small expenditure items are adequate. The ERA was therefore satisfied that these smaller capital expenditure items within the other depreciable assets asset class would be incurred by a service provider acting efficiently and in accordance with good industry practice. The ERA therefore concluded that the capital expenditure for these items satisfied rule 79(1)(a) of the NGR.

168 SSIR is SCADA Satellite Infrastructure Refresh. This was work attributable to the GGP following SCADA system upgrading, and appointment of a new satellite communications service provider. It involved clear delineation of the boundaries between APA's SCADA facilities at critical sites, and the communications service provider's facilities, to ensure the appropriate party responded to equipment faults which caused a loss of data used for the control of pipeline operations.

169 A pipeline simulation model has been purchased for GGP. The model is "real-time", for operations management, and not a static flow model of the type used in pipeline capacity planning. It allows dynamic analysis of gas flow and line pack under different operating conditions, to determine flows to delivery points, and "survival time" in the event of an incident (such as compressor unit failure) disrupting gas flow at any point along the pipeline. Real time flow management has become increasingly important as the capacity of the GGP has been fully contracted, and flow rates have risen.

423. GGT proposed to include larger amounts of capital expenditure for the following projects in the AA3 regulatory asset base which were not included in the AA3 final decision capital expenditure forecast:

- Heavy commercial vehicle replacement (proposed capital expenditure $0.426 million) – During AA3 GGT incurred costs for heavy vehicles for the Karratha, Newman, Leinster and Kalgoorlie sites. GGT stated that it overlooked including these vehicles as part of proposed capital expenditure during the AA3 access arrangement preparation.
- Condition-based replacement (proposed capital expenditure $0.145 million) – During AA3 GGT incurred the initial costs of work on compressor station power supply system replacements identified from reliability and criticality reviews carried out by GGT in 2018.

424. The ERA concluded that the heavy commercial vehicle replacement was justifiable because it was necessary to maintain the integrity of the services, which is a justifiable ground for capital expenditure under rule 79(2)(c)(ii) of the NGR.[170] The proposed heavy commercial vehicle replacement capital expenditure therefore satisfied rule 79(1)(b) of the NGR.

425. The heavy commercial vehicle replacement was expenditure that would be incurred by a prudent service provider acting efficiently and in accordance with accepted good industry practice and therefore satisfied rule 79(1)(a) of the NGR.[171]

426. The condition-based replacement capital expenditure was justifiable for the reason that it was necessary to maintain the integrity of the services, which is a justifiable ground for capital expenditure under rule 79(2)(c)(ii) of the NGR.[172] The proposed condition-based replacement capital expenditure therefore satisfied rule 79(1)(b) of the NGR.

427. The condition-based replacement capital expenditure was expenditure that would be incurred by a prudent service provider acting efficiently and in accordance with accepted good industry practice and therefore satisfied rule 79(1)(a) of the NGR.[173]

428. The ERA was satisfied that the proposed capital expenditure for the other depreciable assets asset class was allocated according to the cost allocation method set out in the AA3 final decision and, therefore, was properly allocated as required by rule 79(6)(c) of the NGR. As outlined at paragraphs 421 to 427, the ERA concluded that all items of proposed capital expenditure for this asset class satisfied the criteria for conforming capital expenditure set out by rules 79(1)(a) and 79(1)(b) of the NGR.

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170 The ERA's view on this point was supported by EMCa's technical advice, which was that the heavy commercial vehicle replacement was likely to satisfy the conforming capital expenditure criteria. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 162.

171 The ERA's view on this point was supported by EMCa's technical advice, which was that the heavy commercial vehicle replacement was likely to satisfy the conforming capital expenditure criteria. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 162.

172 The ERA's view on this point was supported by EMCa's technical advice, which was that the condition-based replacement was likely to satisfy the conforming capital expenditure criteria. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 162.

173 The ERA's view on this point was aligned with EMCa's view, which was that the condition-based replacement was likely to satisfy the conforming capital expenditure criteria. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 162.

The ERA therefore concluded that all the capital expenditure items proposed by GGT for other depreciable assets for AA3, totalling $0.858 million, satisfied the criteria for conforming capital expenditure set out in rule 79(1) of the NGR and included this in the regulatory asset base for AA3.

429. The conforming capital expenditure included in the capital base for AA3 for the 'other depreciable assets' asset class in the draft decision is shown in Table 35.

Table 35 ERA draft decision conforming capital expenditure for the other depreciable assets asset class (AA3) ($ million nominal)

Project/Work item	2015	2016	2017	2018	2019	AA3 total
Condition-based replacement	0.013	-	-	0.059	0.073	0.145
SSIR - GGP upgrade	-	-	-	0.006	0.019	0.025
On-line SIM	-	-	-	-	0.032	0.032
Leinster/Karratha trucks	-	0.317	-	0.027	0.082	0.426
Newman maintenance base concrete cross overs	-	-	-	0.024	-	0.024
Miscellaneous capital - GGT tools, gas detectors etc	(0.000)	0.005	0.103	0.006	0.019	0.133
Replacement lighting towers	0.039	-	-	-	-	0.039
Yarraloola unit Programmable Logic Controller back plane	0.015	-	-	-	-	0.015
Direct current voltage gradient survey	-	-	0.004	-	-	0.004
Miscellaneous capital financial year 2018	-	-	0.017	-	-	0.017
Total conforming AA3 capital expenditure - Other depreciable assets	**0.067**	**0.321**	**0.124**	**0.122**	**0.224**	**0.858**

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 81, Table 26.

Summary of assessment of capital expenditure – All asset classes

430. Based on the discussion and conclusions outlined in paragraphs 317 to 429, the ERA determined in the draft decision that the conforming capital expenditure for AA3 was as shown in Table 36.

Table 36 ERA draft decision conforming capital expenditure for AA3 ($ million nominal)

Project/Work item	2015	2016	2017	2018	2019	AA3 total
Pipeline and laterals	1.766	0.492	0.276	0.065	-	2.599
MLV and scraper stations	0.110	0.001	-	-	-	0.111
Compressor stations	-0.016	-	0.966	0.327	0.919	2.196
Receipt and delivery points	0.412	-0.395	0.001	0.188	0.126	0.331
SCADA, communications and electronic equipment	0.892	0.990	0.065	0.110	-	2.056
Cathodic protection	-	-	-	-	0.075	0.075
Maintenance bases and depots	0.025	-	-	0.019	0.313	0.357
Other depreciable assets	0.067	0.321	0.124	0.122	0.224	0.858
Non-depreciable assets	-	-	-	-	-	-
Total conforming AA3 capital expenditure - All asset classes	**3.255**	**1.409**	**1.432**	**0.831**	**1.657**	**8.584**

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 82, Table 27.

431. Table 37 shows the ERA's amended draft decision values for calculating the opening capital base for the AA4 period. The ERA required that the opening capital base at 1 January 2020 be amended to $362.929 million.

Table 37 ERA's draft decision amended opening capital base at 1 January 2020 ($ million real as at 31 December 2018)

	2015	2016	2017	2018	2019
Opening capital base AA3	407.674	403.630	393.541	383.426	372.707
Plus: capital expenditure	3.400	1.393	1.396	0.775	1.588
Less: Depreciation	7.444	11.482	11.511	11.494	11.366
Less: Asset disposals	0.000	0.000	0.000	0.000	0.000
Opening capital base for AA4	403.630	393.541	383.426	372.707	362.929

Some numbers may not add due to rounding.

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 82, Table 28.

Draft Decision Required Amendment 4

GGT must amend the opening capital base at 1 January 2020 to reflect the values set out in Table 28 of [the] draft decision. [Table 37 of this final decision]

GGT's response to the draft decision

432. GGT's revised proposed opening capital base for AA4 is shown in Table 38.

Table 38: GGP amended proposed revised opening capital base ($ million real as at 31 December 2018)

	2015	2016	2017	2018	2019
Opening capital base	413.664	409.656	399.612	389.542	378.804
Plus: Capital expenditure	3.391	1.393	1.395	0.711	1.589
Less: depreciation	7.399	11.437	11.466	11.449	11.321
Less: asset disposals	0.000	0.000	0.000	0.000	0.000
Closing asset value	409.656	399.612	389.542	378.804	369.072

Source: GGT, 11 September 2019, Access Arrangement Revision Proposal Response to ERA Draft Decision Submission, p. 5, Table 4.

433. GGT's revised proposal stated that GGT accepted the draft decision conclusions on its proposed AA3 capital expenditure, recognising, however, that GGT's proposed capital expenditures for 2018 and 2019 were both estimates. GGT stated that as a consequence, the opening capital base at 1 January 2020 may need to be adjusted in accordance with rule 77(2)(a) of the NGR when setting the opening capital base for the access arrangement period expected to commence on 1 January 2025.[174]

434. While GGT accepted the draft decision conclusions on its proposed AA3 capital expenditure, its revised proposal for the value of its opening capital base at 1 January 2020 differed from the value in draft decision required amendment 4 due to:[175]

- GGT applying a correction to the inflation factor used to escalate the nominal value of GGT's closing capital base at 31 December 2014 to a value denominated in real dollars as at 31 December 2018. GGT submitted that the real value of the opening capital base as at 1 January 2015 calculated by the ERA in its draft decision ($407.674 million in 31 December 2018 real dollars) was incorrectly converted from its nominal closing value as at 31 December 2014 ($390.326 million in nominal dollars) due to the application of an incorrect inflation factor. Specifically, GGT submitted that the ERA's draft decision inflated the nominal closing value as at 31 December 2014 over three years from December 2015 to December 2018 when it should have inflated this value over four years from December 2014 to December 2018 to obtain the value of the opening capital base as at 1 January 2015 in 2018 real dollars. GGT calculated that the value of its opening capital base as at 1 January 2015 should be $413.664 million in 2018 real dollars after correcting the inflation factor as it submitted.[176]

[174] GGT, 11 September 2019, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission,* p. 6.

[175] GGT, 11 September 2019, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission,* pp. 5-7.

[176] GGT, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission,* 11 September 2019, p. 6.

- GGT applying a correction to the roll forward of its conforming capital expenditure for 2014 values. In the ERA's draft decision tariff model, the real value of GGT's 2014 conforming capital expenditures (denominated in real 2013 dollars) is rolled into the regulatory asset base for 2015. GGT submitted that it is the nominal values of those expenditures that should have been rolled forward. GGT's revised proposed AA4 opening capital base reflects that GGT rolled the nominal value of GGT's 2014 conforming capital expenditures into its regulatory asset base, rather than the real values.
- GGT applying a correction to the depreciation of the compressor controls asset class. In the draft decision tariff model, the value of depreciation for the compressor controls asset class changed from a quarterly value of $0.0242 million in 2015 to $0.0672 million in 2016. GGT considered that depreciation should not change during the life of the assets in question. GGT's revised proposed AA4 opening capital base reflects that the depreciation for the compressor controls asset class remains unchanged from 2015 to 2016.
- GGT applying a correction to the depreciation of the receipt and delivery points asset class. In the draft decision tariff model, the value of depreciation for the receipt and delivery points asset class changed from a quarterly value of $0.0013 million in 2015 to $0.0008 million in 2016. GGT considered that depreciation should not change during the life of the assets in question. GGT's revised proposed AA4 opening capital base reflects that the depreciation for the receipt and delivery points asset class remains unchanged from 2015 to 2016.

Final decision

435. As outlined at paragraphs 432 to 434, GGT's revised proposed opening capital base reflects that GGT accepted the draft decision conclusions on GGT's AA3 capital expenditure. However, GGT calculated a different value for its opening capital base for AA4 due to proposed amendments to the modelling of depreciation and inflation applied in the draft decision.

436. The ERA has reviewed a typographical error in the maintenance bases and depots asset class in the draft decision. The draft decision showed that the ERA included $0.001 million of conforming capital expenditure in GGT's regulatory asset base for the Paraburdoo accommodation upgrade in 2015.[177] This value should have been $0.011 million. The amount of total maintenance bases and depots conforming capital expenditure, shown as $0.357 million in the draft decision, was nonetheless correct.

437. The ERA has maintained its draft decision position on the projects and expenditure amounts for those projects which it considers are conforming capital expenditure according to rule 79 of the NGR. The ERA's final decision opening capital base for AA4, however, reflects that the ERA has applied GGT's proposed changes to the modelling of inflation and depreciation for deriving its AA3 capital base in calculating the opening capital base for AA4 for this final decision (as set out in paragraphs 432 to 434 above). The changes correct for errors in the modelling of the opening capital base for AA4 in the draft decision and the effect of the changes is that the AA4 opening capital base accurately applies the approach to calculating the opening capital base set out in rule 77 of the NGR.

[177] ERA, *Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, 31 July 2019, p. 78, paragraph 335 and Table 25.

438. The ERA corrected an error in the financial modelling of the working capital (non-depreciable assets) included in GGT's AA3 capital base for the AA4 draft decision. The ERA's intention in the draft decision was that the amount of non-depreciable assets would be unchanged from the AA3 final decision. However, non-depreciable assets in the draft decision had a small reduction in real dollar terms each year. The ERA has now corrected the calculation by converting the amount of non-depreciable assets from the AA3 final decision of $3.823 million (real dollars as at 31 December 2014) to $4.092 million (real dollars as at 31 December 2018) for each of year of AA3.

439. The final decision conforming capital expenditure for AA3 is shown in Table 39.

Table 39 Final decision – AA3 conforming capital expenditure ($ million nominal)

Project	2015	2016	2017	2018	2019	AA3 total
Pipeline and laterals	1.766	0.492	0.276	0.001	-	2.535
MLV and scraper stations	0.110	0.001	-	-	-	0.111
Compressor stations	-0.016	-	0.966	0.327	0.910	2.187
Receipt and delivery points	0.412	-0.395	0.001	0.188	0.124	0.330
SCADA, communications and electronic equipment	0.892	0.990	0.065	0.110	0.000	2.056
Cathodic protection	-	-	-	-	0.074	0.074
Maintenance bases and depots	0.025	0.000	0.000	0.019	0.309	0.353
Other depreciable assets	0.067	0.321	0.124	0.122	0.222	0.856
Equity raising cost	-	-	-	-	-	-
Non-depreciable assets	0	0	0	0	0	0
Total conforming AA3 capital expenditure - All asset classes*	**3.255**	**1.409**	**1.432**	**0.766**	**1.640**	**8.502**

Note: $0.064 million (nominal dollars) of the difference between the Total conforming AA3 capital expenditure – All asset classes for AA3 shown in **Table 39** *and the total shown in* **Table 36** *is due to an error in Table 27 of the draft decision (reproduced as* **Table 36** *of this final decision) where the ERA had not deducted the capital expenditure for the 'additional capacity feasibility load project financial year 2018' ($0.064 million) from the conforming capital expenditure for the pipeline and laterals asset class for 2018. The 'additional capacity feasibility load project financial year 2018' was considered to be speculative investment. The remainder of the difference is due to differences between the inflation rates applied by the ERA in its final decision modelling and its draft decision modelling.*

440. Table 40 shows the ERA's final decision values for calculating the opening capital base for the fourth access arrangement period. The ERA requires that the opening capital base at 1 January 2020 be amended to $377.206 million (nominal dollars).

Table 40 Final decision - Opening capital base at 1 January 2020 ($ million nominal)

	2015	2016	2017	2018	2019
Opening capital base AA3 (start of year)	390.362	393.109	389.184	386.667	382.768
Plus: Inflationary gains	6.591	5.802	7.430	6.899	4.364
Opening capital base AA3 (end of year)	396.954	398.912	396.613	393.565	387.131
Plus: Capital expenditure	3.255	1.409	1.432	0.766	1.640
Less: Depreciation	7.100	11.137	11.379	11.564	11.565
Less: Asset disposals	0.000	0.000	0.000	0.000	0.000
Closing capital base	393.109	389.184	386.667	382.768	377.206

Some numbers may not add due to rounding.

Source: ERA, December 2019, Final decision tariff model.

Required Amendment 3

The opening capital base must reflect the values in Table 40 of this final decision.

Projected capital base

441. Rule 78 of the NGR establishes how to determine the projected capital base for a particular period.

> **78 Projected capital base**
>
> The projected capital base for a particular period is:
>
> (a) the opening capital base;
>
> plus:
>
> (b) forecast conforming capital expenditure for the period;
>
> less:
>
> (c) forecast depreciation for the period; and
>
> (d) the forecast value of pipeline assets to be disposed of in the course of the period.

442. Rule 79 of the NGR sets out the new capital expenditure criteria and defines conforming capital expenditure:

> **79 New capital expenditure criteria**
>
> (1) Conforming capital expenditure is capital expenditure that conforms with the following criteria:
>
> (a) 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; and
>
> (b) the capital expenditure must be justifiable on a ground stated in subrule (2); and
>
> (c) the capital expenditure must be for expenditure that is properly allocated in accordance with the requirements of subrule (6).
>
> (2) Capital expenditure is justifiable if:
>
> (a) the overall economic value of the expenditure is positive; or
>
> (b) the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the capital expenditure; or
>
> (c) the capital expenditure is necessary:
>
> (i) to maintain and improve the safety of services; or
>
> (ii) to maintain the integrity of services; or
>
> (iii) to comply with a regulatory obligation or requirement; or
>
> (iv) to maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred (as distinct from projected demand that is dependent on an expansion of pipeline capacity); or
>
> (d) the capital expenditure is an aggregate amount divisible into two parts, one referable to incremental services and the other referable to a purpose referred to in paragraph (c), and the former is justifiable under paragraph (b) and the latter under paragraph (c).
>
> (3) In deciding whether the overall economic value of capital expenditure is positive, consideration is to be given only to economic value directly accruing to the service provider, gas producers, users and end users.

(4) In determining the present value of expected incremental revenue:

(a) a tariff will be assumed for incremental services based on (or extrapolated from) prevailing reference tariffs or an estimate of the reference tariffs that would have been set for comparable services if those services had been reference services; and

(b) incremental revenue will be taken to be the gross revenue to be derived from the incremental services less incremental operating expenditure for the incremental services; and

(c) a discount rate is to be used equal to the rate of return implicit in the reference tariff.

(5) If capital expenditure made during an access arrangement period conforms, in part, with the criteria laid down in this rule, the capital expenditure is, to that extent, to be regarded as conforming capital expenditure.

(6) Conforming capital expenditure that is included in an access arrangement revision proposal must be for expenditure that is allocated between:

(a) reference services;

(b) other services provided by means of the covered pipeline; and

(c) other services provided by means of uncovered parts (if any) of the pipeline,

in accordance with rule 93.

443. Rule 93 states:

93 Allocation of total revenue and costs

(1) Total revenue is to be allocated between reference and other services in the ratio in which costs are allocated between reference and other services.

(2) Costs are to be allocated between reference and other services as follows:

(a) costs directly attributable to reference services are to be allocated to those services; and

(b) costs directly attributable to pipeline services that are not reference services are to be allocated to those services; and

(c) other costs are to be allocated between reference and other services on a basis (which must be consistent with the revenue and pricing principles) determined or approved by the [ERA].

444. Rule 74 of the NGR contains specific requirements for the provision of forecasts and estimates:

74 Forecasts and estimates

(1) Information in the nature of a forecast or estimate must be supported by a statement of the basis of the forecast or estimate.

(2) A forecast or estimate:

(a) must be arrived at on a reasonable basis; and

(b) must represent the best forecast or estimate possible in the circumstances.

GGT's initial proposal

445. GGT's initial access arrangement revision submission proposed a projected capital base for AA4 of $369.387 million at 31 December 2024.

Table 41 GGT's initial proposal projected capital base for AA4 ($ million nominal)

	2020	2021	2022	2023	2024
Opening capital base	380.521	383.467	380.467	376.611	371.995
Capital expenditure	7.389	2.558	2.187	1.857	3.162
Depreciation	(4.453)	(5.548)	(6.043)	(6.473)	(5.770)
Asset disposals	-	-	-	-	-
Closing capital base	383.467	380.467	376.611	371.995	369.387

Source: Goldfields Gas Transmission Pty Ltd, PUBLIC AA tariff model 2020-2024 (1-Jan-2019), 21 December 2018.

446. GGT's proposed capital expenditure by asset class for AA4, as included in its initial proposal, is shown in Table 42 in nominal dollars and in Table 43 in real dollars (as at 31 December 2018).

Table 42 GGT initial proposal AA4 capital expenditure ($ million nominal)

	2020	2021	2022	2023	2024	Total
Pipeline and laterals	0.400	-	-	-	0.224	0.623
MLV and scraper stations	-	-	-	-	-	-
Compressor stations	1.764	0.344	1.185	0.230	2.028	5.551
Receipt and delivery points	-	-	-	-	-	-
SCADA, communications and electronic equipment	0.990	1.690	0.653	1.144	0.848	5.325
Cathodic protection	0.240	0.186	0.350	0.483	0.061	1.320
Maintenance bases and depots	3.995	0.338	-	-	-	4.334
Other depreciable assets	-	-	-	-	-	0
Non-depreciable assets	-	-	-	-	-	0
Total	**7.389**	**2.558**	**2.19**	**1.857**	**3.162**	**17.153**

Source: Goldfields Gas Transmission Pty Ltd, PUBLIC AA tariff model 2020-2024 (1-Jan-2019), 21 December 2018.

Table 43 GGT initial proposal AA4 capital expenditure ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024	Total
Pipeline and laterals	0.385	-	-	-	0.200	0.585
MLV and scraper stations	-	-	-	-	-	-
Compressor stations	1.700	0.325	1.100	0.210	1.815	5.150
Receipt and delivery points	-	-	-	-	-	-
SCADA, communications and electronic equipment	0.954	1.599	0.606	1.043	0.759	4.961
Cathodic protection	0.231	0.176	0.325	0.440	0.055	1.227
Maintenance bases and depots	3.850	0.320	-	-	-	4.170
Other depreciable assets	-	-	-	-	-	-
Non-depreciable assets	-	-	-	-	-	-
Total	**7.120**	**2.420**	**2.031**	**1.693**	**2.829**	**16.093**

Source: Goldfields Gas Transmission Pty Ltd, PUBLIC AA tariff model 2020-2024 (1-Jan-2019), 21 December 2018.

447. The ERA requested GGP to confirm whether the proposed capital expenditure included in the initial access arrangement revision submission reflected the forecast capital expenditure for the covered pipeline only, or for the whole GGP including the covered and uncovered pipelines. GGP's response explained that a significant proportion of the proposed capital expenditure for AA4 included in the initial access arrangement revision submission had not been allocated correctly between the covered pipeline and uncovered GGP assets. GGP's response included new proposed amounts for its forecast AA4 capital expenditure which GGP stated reflected the cost allocation method outlined in paragraph 325.[178] The proposed amounts are shown in Table 45 in nominal dollars and in Table 44 in real dollars as at 31 December 2018. The ERA's evaluation of GGP's proposed AA4 capital expenditures is based on these amounts, though where relevant the ERA's draft decision referred to amounts and unit costs based on the initial proposed amounts as part of its draft decision analysis.[179]

[178] E-mail from Goldfields Gas Transmission Pty Ltd dated 19 July 2019, *GGP Access Arrangement revision: allocation of CAPEX to Covered Pipeline.*

[179] The amounts on which the ERA's draft decision evaluation of GGP's proposed AA4 capital expenditures was based were the amounts allocated to the covered pipeline shown in Excel workbook *20190718 AA CAPEX Forecast 2020 – 2024 revised*, attached to the e-mail from Goldfields Gas Transmission Pty Ltd dated 19 July 2019, *GGP Access Arrangement revision: allocation of CAPEX to Covered Pipeline*.

Table 44 GGT proposed capital expenditure for AA4 - Revised submission ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024	Total AA4
Pipeline and laterals	0.266	-	-	-	0.139	0.405
MLV and scraper stations	-	-	-	-	-	-
Compressor stations	1.138	0.183	0.832	0.069	1.219	3.441
Receipt and delivery points	0.204	0.749	0.137	-	-	1.090
SCADA, communications and electronic equipment	0.376	0.170	0.279	0.724	0.527	2.076
Cathodic protection	0.160	0.121	0.224	0.306	0.038	0.848
Maintenance bases and depots	2.662	0.220	-	-	-	2.882
Other depreciable assets	-	-	-	-	-	-
Non-depreciable assets	-	-	-	-	-	-
Total	**4.806**	**1.443**	**1.472**	**1.099**	**1.923**	**10.743**

Source: Workbook *20190718 AA CAPEX Forecast 2020 – 2024 revised*, attached to e-mail from Goldfields Gas Transmission Pty Ltd dated 19 July 2019, *GGP Access Arrangement revision: allocation of CAPEX to Covered Pipeline.*

Table 45 GGT proposed capital expenditure for AA4 - Revised submission ($ million nominal)

	2020	2021	2022	2023	2024	Total
Pipeline and laterals	0.276	-	-	-	0.155	0.431
MLV and scraper stations	-	-	-	-	-	-
Compressor stations	1.181	0.193	0.896	0.076	1.362	3.709
Receipt and delivery points	0.212	0.791	0.148	-	-	1.151
SCADA, communications and electronic equipment	0.390	0.180	0.301	0.795	0.589	2.254
Cathodic protection	0.166	0.128	0.241	0.335	0.043	0.913
Maintenance bases and depots	2.762	0.233	-	-	-	2.995
Other depreciable assets	-	-	-	-	-	-
Non-depreciable assets	-	-	-	-	-	-
Total	**4.987**	**1.525**	**1.585**	**1.206**	**2.149**	**11.453**

Source: Workbook *20190718 AA CAPEX Forecast 2020 – 2024 revised*, attached to e-mail from Goldfields Gas Transmission Pty Ltd dated 19 July 2019, *GGP Access Arrangement revision: allocation of CAPEX to Covered Pipeline.*

448. GGT's proposed capital expenditure comprised the sum of the forecast costs of several capital projects. The proposed capital projects consisted of projects for renewing and upgrading parts of the covered pipeline, rather than growth expenditures. The projects included in the proposed capital expenditure are discussed below as part of the ERA's draft decision considerations.

449. GGT's proposed AA4 capital expenditure was 19.87 per cent higher than its AA3 proposed conforming capital expenditure in real terms, as shown in Table 46 below. There are significant differences between the proposed AA4 capital expenditure and AA3 proposed conforming capital expenditure on an asset class level.

Table 46 GGT proposed AA4 capital expenditure and proposed AA3 conforming capital expenditure ($ million real as at 31 December 2018)

	AA4 proposed capital expenditure	AA3 proposed conforming capital expenditure	Difference ($)	Difference (%)
Pipeline and laterals	0.405	2.599	- 2.194	- 84.42
Main line valve and scraper stations	-	0.111	- 0.111	- 100.00
Compressor stations	3.441	2.496	0.945	37.87
Receipt and delivery point facilities	1.090	0.331	0.759	229.40
SCADA, communications and electronic equipment	2.076	2.135	- 0.059	- 2.74
Cathodic protection	0.848	0.075	0.773	1031.13
Maintenance bases and depots	2.882	0.357	2.525	707.22
Other depreciable assets	-	0.858	- 0.858	- 100.00
Non-depreciable assets	-	-	-	-
Total	**10.743**	**8.962**	**1.781**	**19.87**

Source: ERA analysis based on *Workbook 20190718 AA CAPEX Forecast 2020 – 2024 revised,* attached to e-mail from Goldfields Gas Transmission Pty Ltd dated 19 July 2019, *GGP Access Arrangement revision: allocation of CAPEX to Covered Pipeline* and Goldfields Gas Transmission Pty Ltd, *Goldfields Gas Pipeline Proposed Revised Access Arrangement Information,* 21 December 2018, p. 10, Table 7.

Draft decision

450. In its draft decision, the ERA assessed GGT's proposed capital expenditure for AA4 in accordance with the NGR using a four-step framework as follows:

- Considering whether the expenditure satisfied the prudent service provider test set out in rule 79(1)(a) of the NGR.
- Evaluating whether the expenditure was justifiable on the grounds set out in rule 79(2) of the NGR.

- Assessing whether the forecasts or estimates complied with rule 74(2) of the NGR.
- Ensuring that only capital expenditure for the covered pipeline was included as conforming capital expenditure (rule 79 of the NGR).

451. As stated at paragraph 318, the ERA's assessment of GGT's proposed forecast capital expenditure for AA4 also considered GGT's governance and investment management framework and assessed how the framework applied to actual capital expenditure during AA3. The ERA's view was that while GGT had investment management processes in place that were consistent with common industry practice for businesses with similar levels of complexity and capital expenditure, GGT's history of overestimating its capital expenditure forecasts implied that its capital expenditure forecasting processes were not producing reliable forecasts. The ERA took this into account when evaluating GGT's proposed capital expenditure for the draft decision.

452. EMCa's technical advice regarding GGT's governance and investment management framework supported the ERA's view. EMCa found that GGT provided evidence of a governance process that provides progressive and iterative review of proposed expenditure in development of its AA4 initial proposal but was not satisfied that it was an effective process. EMCa found that GGT did not provide information in its AA4 proposal documentation or in its responses to information requests to demonstrate that it had taken effective steps to improve its capital expenditure forecasting accuracy.[180]

453. As stated in paragraph 324, the ERA considered that the allocation of costs between the covered and uncovered pipeline, as set out in the final decision for AA3, provided a means for allocating capital expenditure between services provided by means of the covered and uncovered pipelines of the GGP that was consistent with rule 79(6), and by implication rule 93, of the NGR.[181] The ERA's assessment of the capital expenditure GGT proposed for AA4, therefore, examined whether the forecast capital expenditure had been allocated to the covered pipeline consistent with this cost allocation method.

454. The ERA considered information provided by GGT and technical advice from EMCa to determine the amount of capital expenditure that met the requirements of the NGR.

Pipeline and laterals

455. GGT's proposed AA4 conforming capital expenditure included $0.405 million of capital expenditure in the pipeline and laterals asset class. This comprised capital expenditure for two projects:

- verification digs program
- preparation for in-line inspection.

456. Table 47 shows GGT's proposed capital expenditure for pipelines and laterals for AA4.

[180] Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraphs 62 and 106.

[181] Economic Regulation Authority, 21 July 2016, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, paragraphs 1974 – 1991.

Table 47 Proposed AA4 capital expenditure for pipelines and laterals asset class ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024	Total
Verification digs	0.266	-	-	-	-	0.266
In-line inspection preparation	-	-	-	-	0.139	0.139
AA4 total proposed capital expenditure – Pipeline and laterals	**0.266**	**-**	**-**	**-**	**0.139**	**0.405**

Source: Workbook 20190718 AA CAPEX Forecast 2020 – 2024 revised, attached to e-mail from Goldfields Gas Transmission Pty Ltd dated 19 July 2019, GGP Access Arrangement revision: allocation of CAPEX to Covered Pipeline.

457. As shown in Table 47, the proposed AA4 capital expenditure for the verification digs program was $0.266 million, all of which was expected to be incurred in 2020.

458. The proposed verification digs expenditure was for excavation and repair of several features on the GGP where metal loss corrosion was identified. These excavation and repair activities included nine verification digs and in-line inspection of 15 anomalies to be investigated through direct current voltage gradient surveys. GGT considered that these activities were necessary to maintain and improve the safety of pipeline services and to maintain the integrity of services.

459. GGT's cost estimate for the verification digs was based on recent contractor quotes for digs on other APA pipelines plus estimates of materials and equipment costs and internal costs for APA to undertake engineering assessments related to the digs.[182]

460. Based on technical advice, the ERA concluded that the verification digs proposed were in accordance with accepted good industry practice as required by rule 79(1)(a).[183]

461. The ERA was not satisfied, however, that the proposed costs were consistent with the amount that would be incurred by a prudent service provider acting efficiently, as is also required by rule 79(1)(a).

462. The initial cost estimate supplied for the program by GGT in the business case for the project equated to an average verification dig cost of $42,778.[184] Applying the cost allocation method set out in paragraph 325 produced an average verification dig cost of $29,573 allocable to the covered pipeline. This was markedly higher than the

[182] GGT supplied a business case for the verification digs and subsequently supplied a revised version of this business case. While the original and revised business cases show the same estimate of total cost for the verification digs, the revised version shows a more detailed scope of work for the verification digs. The assessment of the verification digs in the draft decision is based on the revised business case. The Excel workbook *20190718 AA CAPEX Forecast 2020 – 2024 revised*, attached to e-mail from Goldfields Gas Transmission Pty Ltd dated 19 July 2019, *GGP Access Arrangement revision: allocation of CAPEX to Covered Pipeline*, clarified the amount of the verification digs project cost that GGT proposed to allocate to the covered pipeline.

[183] EMCa supplied its independent technical view that the scope of work for the verification digs is consistent with good industry practice. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 177.

[184] Real dollars at 31 December 2018. Average verification dig cost is calculated based on the information in Goldfields Gas Transmission Pty Ltd, 21 December 2018, *Goldfields Gas Pipeline, Access Arrangement Revision Proposal Supporting Information*, *Attachment 1: CAPEX Business Cases,* Business Case 01.

average capital expenditure per dig incurred by GGT and allocated to the covered pipeline in AA3, which was approximately $10,300.[185]

463. GGT supplied a revised cost estimate after its initial proposal. The revised cost estimate detailed that the verification digs were expected to be undertaken at approximately $20,600 each, and that the verification digs program also included investigation of 15 other pipeline anomalies through direct current voltage gradient surveys for approximately $6,700 each.[186] This revised cost estimate reflected the costs for the whole GGP, rather than the allocated costs for the covered pipeline. Other than the revised cost estimate, GGT did not provide any explanation for the increase in the proposed cost of the digs compared to the AA3 actual costs. Given that the AA3 unit cost of $10,300 was the recent actual cost for the same type of activity, this cost estimate was considered to represent the best estimate possible for the verification digs, as required by rule 74(2) of the NGR, and the cost of the digs that would be incurred by a prudent service provider acting efficiently, as required by rule 79(1)(a).[187]

464. The ERA required that the capital expenditure forecast for AA4 be amended to reflect a total forecast of $0.214 million for the verification digs program. This forecast was derived by including:

- 14 verification digs being conducted at a unit cost of $10,300, which was the actual unit cost for the digs incurred by GGT during AA3 that was allocable to the covered pipeline as outlined in paragraph 463.[188] The allocation of the cost of the digs was according to the cost allocation method outlined in paragraph 325 and therefore was consistent with rule 79(1)(c) of the NGR.
- An allocation of costs to the covered pipeline of 15 direct current voltage gradient surveys. The unit cost for the surveys was estimated at $6,700, which was the unallocated unit cost estimate provided in the revised cost estimate. Based on EMCa's technical advice, the ERA considered that a unit cost estimate of $6,700 for the direct voltage gradient surveys would be incurred by a prudent service provider acting efficiently.[189] The allocation of the unit cost to the covered pipeline was calculated by applying the cost allocation method outlined in paragraph 325 and therefore was consistent with rule 79(1)(c) of the NGR.

465. As shown in Table 47, GGT's proposed AA4 capital expenditure for in-line inspection preparation activities was $0.139 million and expected to be incurred in 2024.[190]

466. The proposed in-line inspection preparation expenditure was for activities to prepare for in-line inspection of the GGP. GGP planned to conduct the inspection in 2025, while the preparatory activities were planned for 2024. The scope of the preparatory activities was not yet finalised at the time the business case for the in-line inspection preparation was prepared. GGT stated that the project scope could include inspection and upgrade of the easement, liaison with landowners, contracted rectification work, gas flow modelling, liaison with shippers and stakeholders,

185 Real dollars at 31 December 2018. This is the amount which was allocable to the covered pipeline only.

186 All figures real dollars at 31 December 2018.

187 Real dollars as at 31 December 2018. This is the amount which was allocable to the covered pipeline only.

188 Real dollars at 31 December 2018.

189 EMCa supplied its independent technical view that a unit cost of $6,700 for the direct current voltage gradient surveys was reasonable based on their experience. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 177.

190 Real dollars at 31 December 2018.

procedure development and risk assessment and mitigation. GGT considered that these activities were necessary to maintain and improve the safety of pipeline services, to maintain the integrity of services and to maintain GGT's capacity to meet levels of demand for services.

467. GGT's cost estimate for the inline inspection preparation was based on the costs incurred for activities previously conducted by GGT prior to in-line inspection.

468. The GGP was last inspected in 2015. The pipeline must be inspected every 10 years and so the next inspection is due in 2025.

469. The ERA received technical advice that the in-line inspection preparation activities could be conducted in the same year as the inspection itself, and that the easement grading contemplated under the provided scope for the preparation activities was best conducted as close as possible to the inspection itself.[191] The ERA concluded that it would be prudent and efficient for the inline inspection preparation activities to be conducted in 2025, rather than in 2024. Rule 79(1)(a) of the NGR requires that capital expenditure must be such as would be incurred by a prudent service provider acting efficiently, to achieve the lowest sustainable cost of providing services.

470. GGP did not justify why the in-line inspection preparation activities needed to be conducted in 2024. The ERA therefore did not consider that the in-line inspection preparation activities needed to be conducted during AA4 to comply with a regulatory obligation or requirement, as would render the expenditure justifiable according to rule 79(2)(c)(iii).

471. Based on the conclusions outlined in paragraphs 469 to 470, the ERA required that the capital expenditure forecast for AA4 be amended to exclude the proposed expenditure for the in-line inspection preparation activities.

Compressor stations

472. GGT's proposed AA4 conforming capital expenditure included $3.441 million of capital expenditure in the compressor stations asset class.[192] This comprised capital expenditure for three projects:

- gas engine alternator overhauls
- reliability replacement program
- hazardous area rectification program.

473. The proposed AA4 capital expenditure for the projects within the compressor stations asset class was distributed over AA4 as shown in Table 48.

[191] Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 181.

[192] Real dollars at 31 December 2018.

Table 48 Proposed AA4 capital expenditure for compressor stations asset class ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024	Total
Gas engine alternator overhaul	-	0.114	0.076	-	0.038	0.228
Reliability replacement	1.000	-	0.619	-	1.042	2.660
Hazardous area rectification program	0.138	0.069	0.137	0.069	0.139	0.553
AA4 total proposed capital expenditure – Compressor stations	**1.138**	**0.183**	**0.832**	**0.069**	**1.219**	**3.441**

Source: Workbook 20190718 AA CAPEX Forecast 2020 – 2024 revised, attached to e-mail from Goldfields Gas Transmission Pty Ltd dated 19 July 2019, GGP Access Arrangement revision: allocation of CAPEX to Covered Pipeline.

474. As shown in Table 48, the proposed AA4 capital expenditure for the gas engine alternator overhauls was $0.228 million.[193]

475. The proposed gas engine alternator overhaul project comprised the replacement of the gas engine alternator units in four locations on the GGP.[194] GGT stated that the planned replacements were driven by manufacturer recommendations to overhaul the units after a specified number (60,000) of operating hours, and failure to undertake the overhauls as recommended would increase the risk of compressor station failures. GGT therefore considered that the gas engine alternator overhaul project was justified in order to maintain the integrity of pipeline services.

476. GGT's business case for the gas engine alternator overhauls applied an estimated average unit cost of [redacted] per unit.[195] GGT based its unit cost estimate on the cost of gas engine alternator overhauls recently carried out at other locations.

477. Due to consistency with manufacturer's recommendations, and based on technical advice received, the ERA accepted that the proposed replacement of gas engine alternators was in accordance with accepted good industry practice as required by rule 79(1)(a).[196]

478. Given that GGT's unit cost estimate for replacement of the gas engine alternators was based on actual costs for the same type of activity, this cost estimate was considered to represent the best estimate possible for the unit replacements, as required by rule 74(2) of the NGR. For the same reason the ERA concluded that the

193 Real dollars at 31 December 2018.

194 These locations were Paraburdoo GEA 1, Paraburdoo GEA 2, Wiluna GEA A and Wiluna GEA B. GGT proposed to overhaul the gas engine alternators at three additional locations, including Ilgarari GEA A, Ilgarari GEA B and Yarraloola GEA B, however, the expenditure for these three overhauls was included as part of the proposed AA4 expenditure for GGT's reliability replacement program which is discussed in paragraphs 481 to 486.

195 Real dollars at 31 December 2018. This is the cost for the whole GGP, rather than an allocation of cost to the covered pipeline.

196 EMCa supplied its independent technical view that replacement of the gas engine alternators at 60,000 hours was consistent with good industry practice. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 185.

proposed unit costs were consistent with the amount that would be incurred by a prudent service provider acting efficiently, as is also required by rule 79(1)(a).[197]

479. The ERA did not consider, however, that all four gas engine alternators would require replacement during AA4. Specifically, the ERA was not satisfied that the running hours for the Paraburdoo GEA 1 unit would exceed 60,000 total hours of operation by the end of AA4 as GGT had forecast. This was based on technical advice received that it was more likely than not that Paraburdoo GEA 1 would not reach 60,000 hours of operation by November 2024.[198] The proposed capital expenditure for the gas engine alternator overhaul for Paraburdoo GEA 1 was therefore not included in the revised capital expenditure forecast as the ERA did not consider that incurring this amount during AA4 was justified by any of the reasons outlined in rule 79(2) of the NGR.

480. Based on the reasoning and conclusions outlined in paragraphs 477 to 479, the capital expenditure included in the revised capital expenditure forecast was $0.190 million, comprising the proposed capital expenditure for the units at Paraburdoo GEA 2, Wiluna GEA A and Wiluna GEA B.[199] The capital expenditure for these units was allocated to the covered pipeline according to the cost allocation method outlined in paragraph 325 and satisfies rule 79(1)(c) of the NGR. This capital expenditure forecast therefore met all the criteria for conforming capital expenditure set out at rule 79 of the NGR.

481. As shown in Table 48, the proposed AA4 capital expenditure for the reliability replacement program was $2.660 million.[200]

482. The proposed reliability replacement program was for replacement of older compressor station power supply system equipment on the GGP during AA4. GGT stated that the proposed replacements were driven by equipment failures at some of the GGP's compressor stations, which had the potential to reduce the GGP's transportation service reliability and pipeline capacity available for reference services. GGT, therefore, considered that the reliability replacement program was justified to maintain the integrity of pipeline services.

483. GGT based its proposed expenditure for the reliability replacement program on a quote by a third-party supplier of the replacement equipment and additional internal labour costs which GGT expected would be incurred to assist with the installation and testing of the new equipment and disposal of the old equipment.

484. The ERA was not satisfied that the proposed capital expenditure for the reliability replacement program for AA4 would be incurred by a service provider acting efficiently and in accordance with accepted good industry practice as is required by rule 79(1)(a). The information supplied regarding the reliability replacement program indicated that the project had not yet been fully scoped or estimated and GGT had only undertaken an initial review of the age, condition and maintenance history and

197 EMCa supplied its independent technical view that replacement of the gas engine alternators at 60,000 hours was consistent with good industry practice. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 185.

198 The reasoning for the technical advisor's conclusion was based on GGT's significant over-estimation of running hours in its previous forecast for AA3. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraphs 187 - 188.

199 Real dollars at 31 December 2018.

200 Real dollars at 31 December 2018.

requirements of the equipment involved.[201] The ERA therefore considered that the amount proposed for the project was an estimate based on an immature scope which could be subject to substantial further refinement.

485. The ERA considered that some of the proposed expenditure for the reliability replacement program was necessary to maintain the integrity of pipeline services and therefore was justifiable under rule 79(2)(c)(ii) of the NGR. The ERA received technical advice that due to the age of the compressor stations and the failures experienced at Yarraloola some expenditure on gas engine alternators and control systems would be required during AA4.[202]

486. While the cost of the entire scope of the proposed reliability replacement program was not considered to be an efficient estimate, given that the ERA considered that some of the expenditure for the work included in the program was justifiable, $1.330 million was included in the draft decision capital expenditure forecast for the reliability replacements.[203] This is equivalent to 50 per cent of the amount proposed by GGT. This adjustment was made because the ERA considered that GGT's estimate for the work in scope had not been arrived at on a reasonable basis, as is required by rule 74(2)(a) of the NGR. As stated in paragraph 484, the project had not yet been fully scoped or estimated and only an initial review of the assets involved had been undertaken. Given the likelihood of substantial further refinement to the scope of the project, the ERA considered a 50 per cent reduction to the proposed amount was reasonable.

487. The ERA also considered that $1.330 million was the best estimate of the efficient cost of the reliability replacement program, as required by rule 79(1)(a). Given that, based on the ERA's review, the $2.660 million of capital expenditure GGT proposed for the reliability replacement program was allocated to the covered pipeline according to the cost allocation method outlined in paragraph 325, the ERA considered that the adjusted forecast of $1.330 million satisfied rule 79(1)(c) of the NGR.

488. As shown in Table 48, the proposed AA4 capital expenditure for the hazardous areas rectification program was $0.553 million.

489. The proposed hazardous areas rectification program included work for inspecting and recording all electrical equipment in hazardous areas on the GGP into hazardous area verification dossiers. The provided scope included auditing four sites across Ilgarari, Wiluna and Yarraloola and unspecified scraper and mainline valve stations and conducting rectification work where the inspected sites and equipment did not comply with applicable standards. As the audits were yet to be conducted, the scope of the proposed rectification work was mainly unknown. GGT stated that the inspections proposed were needed to ensure compliance with Australian standards AS60079 and AS2381 regarding electrical equipment installed in a hazardous area and to maintain a safe working environment on the pipeline and so maintain and improve the safety of pipeline services.

201 Goldfields Gas Transmission Pty Ltd, 21 December 2018, *Goldfields Gas Pipeline, Access Arrangement Revision Proposal Supporting Information*, *Attachment 1: CAPEX Business Cases, Business Case 10*, pp. 2-3.

202 Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 194.

203 Real dollars at 31 December 2018.

490. GGT based the proposed expenditure for the hazardous areas rectification program on its past experience. The proposed cost for the hazardous areas rectification activities included in the business case for this project was $0.10 million per site for two sites and $0.20 million per site for the other two sites.

491. The proposed AA4 capital expenditure for the hazardous areas rectification program did not satisfy all the criteria for conforming capital expenditure set out in rule 79 of the NGR as it was not clear that the proposed expenditure would be incurred by a service provider acting efficiently as is required by rule 79(1)(a).

492. The ERA accepted that some level of expenditure for hazardous areas rectification was justifiable as required by rule 79(2)(c) because activities of this nature were necessary to maintain and improve the safety of reference services, to maintain the integrity of reference services and to comply with GGT's regulatory obligations or requirements. Similarly, the ERA concluded that conducting hazardous areas rectification activities was in accordance with good industry practice.

493. While the ERA accepted that some level of hazardous areas rectification activities was justifiable, the information supplied by GGT indicated that the proposed expenditure was estimated based on preliminary information and GGT did not have a clear basis for its estimates. GGT did not provide support that its estimate had been arrived at on a reasonable basis as is required by rule 74(2)(a) of the NGR.

494. The proposed amount for the hazardous areas rectification activities for each of the sites across Ilgarari, Yarraloola and Wiluna exceeded the per site rectification budget shown in the GGP's asset management plan for the financial years 2017 to 2021, which was approximately $50,000 per site.[204] In April 2019, GGT supplied an asset management plan for the financial years 2020 to 2024, however, this version of the plan did not supply a per site rectification budget.

495. In the absence of additional information, the ERA considered that an estimate of $50,000 per site for hazardous areas rectification activities represented the best estimate possible for the hazardous areas rectification activities, as required by rule 74(2)(b) of the NGR. Therefore, the revised capital expenditure forecast included a total of $0.2 million for hazardous areas rectification activities.

Receipt and delivery point facilities

496. GGT's proposed AA4 conforming capital expenditure included $1.090 million of capital expenditure in the receipt and delivery point facilities asset class.[205] This comprised capital expenditure for two projects:

- flow computer upgrade program
- gas chromatograph replacement program.

497. The proposed AA4 capital expenditure for the projects within the receipt and delivery point facilities asset class was distributed over AA4 as shown in Table 49.

[204] Goldfields Gas Transmission Pty Ltd, *Goldfields Gas Pipeline Asset Management Plan FY17 – FY21*, section 4.5.2.2, p. 24.

[205] Real dollars as at 31 December 2018.

Table 49 Proposed AA4 capital expenditure for receipt and delivery point facilities asset class ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024	Total
Flow computer upgrade program	0.066	0.409	-	-	-	0.475
Gas chromatograph replacement program	0.138	0.340	0.137	-	-	0.616
AA4 total proposed capital expenditure	**0.204**	**0.749**	**0.137**	**-**	**-**	**1.090**

Source: Workbook 20190718 AA CAPEX Forecast 2020 – 2024 revised, attached to e-mail from Goldfields Gas Transmission Pty Ltd dated 19 July 2019, GGP Access Arrangement revision: allocation of CAPEX to Covered Pipeline.

498. As shown in Table 49, the proposed AA4 capital expenditure for the flow computer upgrade program was $0.475 million.

499. The flow computer upgrade program included the replacement of flow computers at four sites on the GGP. GGT proposed to replace these computers because, while they are currently operable, the computer software is no longer supported by the vendor and there was difficulty sourcing spare parts for their repair due to manufacturers no longer keeping supplies. Further, the outputs from the flow computers were incompatible with other IT systems used on the GGP and therefore required manual manipulation of output data, which caused a risk of measurement error. GGP therefore considered that replacement of the computers was necessary in order to maintain the integrity of pipeline services.

500. GGT based the proposed expenditure for the flow computer upgrade on the unit costs of similar flow computers installed at other locations between 2015 and 2019.

501. Based on technical advice received that replacement of aged, obsolete flow computers was good industry practice, the ERA was satisfied that replacement of aged flow computers that are obsolete or near obsolescence was in accordance with good industry practice, as required by rule 79(1)(a) of the NGR.[206] Capital expenditure for the replacement of flow computers was necessary to maintain the integrity of services and therefore was justifiable capital expenditure according to rule 79(2)(c)(ii) of the NGR.

502. The proposed cost per computer was efficient and therefore in accordance with rule 79(1)(a) of the NGR given that it was close to the average actual unit cost for replacements of flow computers conducted during AA3.

503. The $0.475 million of proposed capital expenditure for the flow computer upgrades was correctly allocated to the covered pipeline according to the cost allocation method outlined in paragraph 325 and therefore satisfied rule 79(1)(c) of the NGR.

504. Based on the conclusions outlined in paragraphs 501 to 503, $0.475 million of the proposed capital expenditure for flow computer upgrades was considered to satisfy rule 79 of the NGR and was included in the draft decision capital expenditure forecast for AA4.

[206] Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 207.

505. As shown in Table 49, the proposed expenditure for the gas chromatograph replacement program in AA4 was $0.616 million.

506. The gas chromatograph replacement program included the proposed proactive replacement of five gas chromatograph units on the GGP, which GGT considered to be warranted given their age and recent failure rates. GGT stated that the outputs from these gas chromatographs were incompatible with other IT systems used on the GGP and therefore required manual manipulation of output data, which caused a risk of measurement error and reduced GGT's ability to accurately bill customers. GGT considered that the potential for this outcome represented a reputational risk and that the gas chromatograph replacement program was justifiable to maintain the integrity of pipeline services.

507. GGT conducted options analysis for the project, considering two scenarios. The first was to repair the units upon failure. GGT concluded that this option was not acceptable. The second option was the proposed replacement program.

508. The ERA was not satisfied that replacement of all the gas chromatographs proposed by GGT, as opposed to replacement on failure, was justifiable. Given that GGT assessed the risk associated with not replacing the chromatographs as low according to its standard risk assessment classification, the ERA considered that the capital expenditure was not necessary during AA4 to maintain the integrity of the services as GGT proposed and therefore was not justifiable according to rule 79(2)(c) of the NGR.

509. Based on technical advice the ERA considered, however, that replacement of two of the chromatographs would likely be required during AA4 to maintain the integrity of pipeline services and was therefore justifiable according to rule 79(2)(c).[207] The draft decision capital expenditure forecast therefore included $0.4 million for 'gas chromatograph replacement' during AA4, which was 40 per cent of the proposed capital expenditure for this project. Given that the total amount ($0.475 million) of proposed capital expenditure for the 'gas chromatograph replacement' project was correctly allocated to the covered pipeline according to the cost allocation method outlined in paragraph 325, the adjusted amount was also correctly allocated and therefore satisfied rule 79(1)(c) of the NGR.

SCADA and communications

510. GGT's proposed AA4 conforming capital expenditure included $2.076 million of capital expenditure in the SCADA, communications and electronic equipment asset class for one project, the remote terminal unit replacement program. The proposed AA4 capital expenditure for the SCADA and communications asset class was distributed over AA4 as shown in Table 50.

[207] EMCa's technical opinion was that replacement of two gas chromatographs, rather than five, was likely to satisfy the conforming capital expenditure criteria during AA4. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 215.

Table 50 Proposed AA4 capital expenditure for SCADA, communications and electronic equipment asset class ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024	Total
Remote terminal unit replacement program	0.376	0.170	0.279	0.724	0.527	2.076
AA4 total proposed capital expenditure – SCADA, communications and electronic equipment	**0.376**	**0.170**	**0.279**	**0.724**	**0.527**	**2.076**

Source: Workbook 20190718 AA CAPEX Forecast 2020 – 2024 revised, attached to e-mail from Goldfields Gas Transmission Pty Ltd dated 19 July 2019, GGP Access Arrangement revision: allocation of CAPEX to Covered Pipeline.

511. The remote terminal unit replacement program included the replacement of 13 remote terminal units on the GGP during AA4 which were approaching obsolescence. GGT advised that during AA3 it had planned to replace 10 of the units due to obsolete software, but maintenance activities, including the use of second-hand cards, enabled GGT to keep the units in operation. The manufacturer of the units informed GGT that the units would be obsolete and no longer supported from 2018. Additionally, the programming language of the units was no longer compatible with other GGP equipment. GGT considered that replacement of the remote terminal units was justified to maintain and improve the safety of pipeline services and maintain the integrity of the services. GGT conducted options analysis for the project, considering two scenarios. The first was to repair the units upon failure. GGT concluded that this option was unacceptable because repairs could involve extensive downtime and inconvenience. GGT therefore chose the second option, which was the proposed replacement program.

512. GGT proposed to undertake the remote terminal unit replacement program in conjunction with the cathodic protection unit upgrade program. The cathodic protection unit upgrade program covers work to replace the cathodic protection units on the GGP with units that would enable the cathodic protection systems to operate independently from the station controller. The capital expenditure proposed for the cathodic protection upgrade program is discussed separately at paragraphs 520 to 524.

513. GGT's proposed capital expenditure for the remote terminal unit replacement program was based on an allocation of the cost estimate for the project for the whole GGP. The cost estimate for the project for the whole GGP was $3.275 million and was based on the cost for replacement units of a newer style from a new equipment vendor. The $3.275 million cost estimate comprised:

- $3.001 million for the replacement of [redacted] Modicon Quantum remote terminal units with newer styles, equivalent to $[redacted] million per unit.
- $0.274 million for work to enable the cathodic protection systems to operate independently of the station controller.

514. Based on the information supplied regarding the remote terminal unit replacement program, and the technical advice supplied by EMCa, the ERA concluded that replacement of the remote terminal units was in line with good industry practice and necessary in order to maintain and improve the safety of services and to maintain the

integrity of services.[208] The replacement of the [redacted] remote terminal units was therefore justifiable capital expenditure according to rule 79(1)(b) of the NGR. Based on the information supplied and the technical advice supplied by EMCa the ERA did not, however, consider that the work proposed as part of the remote terminal unit program to enable the cathodic protection systems to operate independently of the station controller was justifiable.[209]

515. The ERA was not satisfied that the amount proposed for the program would be incurred by a prudent service provider acting efficiently given the unit costs applied in the business case for this project compared to previous costings for similar work and GGT's history of overestimating its capital expenditure forecasts.

516. GGT allowed $[redacted] million per unit for the replacement of 15 Quantum remote terminal units in its initial proposed revisions to the access arrangement for AA3. GGT advised that the remote terminal unit replacements proposed for AA3 covered a different scope of work to the scope of work for the proposed AA4 replacement program.[210]

517. The ERA considered that $1.226 million represented the best possible forecast of capital expenditure for the remote terminal unit program for AA4, as required by rule 74(2)(b) of the NGR and was in line with what would be incurred by a prudent service provider acting efficiently. This was derived by adjusting the proposed amount of $2.076 million for the project by:

- Excluding the portion of the proposed capital expenditure for the project that was for work to enable the cathodic protection systems to operate independently of the station controller ($0.190 million).
- Reducing the portion of the proposed capital expenditure for the project that was for replacement of the Modicon Quantum remote terminal units ($1.89 million) by 36 per cent ($0.68 million). The 36 per cent reduction was made due to GGT's history of overestimating its capital expenditure forecasts and is equivalent to the percentage difference between GGT's actual capital expenditure and its initial capital expenditure forecast for AA3 (see paragraph 316).

518. The draft decision capital expenditure forecast therefore included $1.226 million for the remote terminal unit replacement program in AA4.

Cathodic protection

519. GGT's proposed AA4 conforming capital expenditure included $0.848 million of capital expenditure in the cathodic protection asset class, comprising capital expenditure for one project for upgrading cathodic protection systems at 14 locations on the GGP.[211]

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208 EMCa's opinion was that some capital expenditure for the remote terminal unit program was likely to satisfy the criteria for conforming capital expenditure however the cost estimate provided by GGT for the program is an unreliable forecast. Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 223.

209 Energy Market Consulting Associates, July 2019, *Review of Technical Aspects of the Proposed Access Arrangement,* paragraph 222.

210 Goldfields Gas Transmission Pty Ltd, 13 February 2019, *Response to information request EMCa 14.*

211 Real dollars at 31 December 2018.

Table 51 Proposed AA4 capital expenditure for cathodic protection asset class ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024	Total
Cathodic protection unit upgrade program	0.160	0.121	0.224	0.306	0.038	0.848
AA4 total proposed capital expenditure – Cathodic protection	**0.160**	**0.121**	**0.224**	**0.306**	**0.038**	**0.848**

Source: Workbook 20190718 AA CAPEX Forecast 2020 – 2024 revised, attached to e-mail from Goldfields Gas Transmission Pty Ltd dated 19 July 2019, GGP Access Arrangement revision: allocation of CAPEX to Covered Pipeline.

520. The proposed cathodic protection unit upgrade program covered replacement of the existing cathodic protection units on the GGP. GGT stated that the proposed work was driven by the ageing of the existing cathodic protection units. The manufacturer of the existing units was no longer operating, and GGT had maintained the units so far by drawing on in-house knowledge and skills. Additionally, the existing units had very limited communication capability and could not be controlled by the SCADA systems on the GGP. GGT stated that for these reasons, maintenance of the cathodic protection units was becoming increasingly difficult, and replacement of the units was needed to maintain the integrity of pipeline services. GGT also stated that the replacement units would be capable of communicating efficiently with the proposed new remote terminal units (see paragraphs 511 to 517) and SCADA system, which would enable remote monitoring, fault finding, switching and routine adjustment where necessary.

521. GGT's cost estimate for the cathodic protection unit upgrade project was developed based on the cost of replacement units from a new vendor and the rates of failure of the existing units.

522. The information supplied by GGT did not demonstrate the full program of cathodic protection unit replacement was justifiable as required by rule 79(2) of the NGR. GGT did not adequately demonstrate why the units should be replaced, as it proposed, rather than on failure. GGT did not demonstrate that installing the new units would contribute to maintaining the integrity of services beyond the level of integrity provided by maintaining the existing units.

523. Additionally, the proposed cost of the cathodic protection unit upgrade program was not consistent with what would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice. GGT's asset management plan for the financial years 2017 to 2021 identified an approximate unit cost for replacement of cathodic protection units of approximately $15,000 whereas the unit cost based on the proposed upgrade program for AA4 was approximately [redacted][212]

524. The ERA required that the capital expenditure forecast for AA4 be amended to exclude the cathodic protection unit upgrade.

[212] All figures real dollars at 31 December 2018.

Maintenance bases and depots

525. GGT's proposed AA4 conforming capital expenditure included $2.882 million of capital expenditure in the maintenance bases and depots asset class.[213] This covered two projects:

- site accommodation upgrade program
- Karratha maintenance base rebuild.

526. The proposed AA4 capital expenditure for the maintenance bases and depots asset class was distributed over AA4 as shown in Table 52.

Table 52 Proposed AA4 capital expenditure for maintenance bases and depots asset class ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024	Total
Site accommodation upgrade program	2.588	0.220	-	-	-	2.778
Karratha maintenance base rebuild	0.104	-	-	-	-	0.104
AA4 total proposed capital expenditure – Maintenance bases and depots	**2.662**	**0.220**	**-**	**-**	**-**	**2.882**

Source: Workbook 20190718 AA CAPEX Forecast 2020 – 2024 revised, attached to e-mail from Goldfields Gas Transmission Pty Ltd dated 19 July 2019, GGP Access Arrangement revision: allocation of CAPEX to Covered Pipeline.

527. As shown in Table 52, the proposed expenditure for the 'site accommodation upgrade' program was $2.882 million.[214]

528. The proposed 'site accommodation upgrade' program included the upgrade of on-site employee accommodation at the Wiluna and Ilgarari compressor stations. GGT stated that the planned upgrades were driven by a recent enterprise bargaining agreement which required GGT to provide accommodation at these sites according to certain specifications. GGT considered that the work was justifiable to maintain and improve the safety of pipeline services.

529. The proposed costs of the 'site accommodation upgrades' were based on GGT's previous experience at other locations and two vendor quotes, of which GGT included the cheapest quote to develop its proposed costs. The actual costs of the upgrades will ultimately depend on the finalisation of the site designs and the outcome of a competitive tender which had not (at the date of the draft decision) been conducted.

530. The ERA concluded that the proposed site upgrades in Ilgarari and Wiluna were justifiable capital expenditure as required by rule 79(2)(c) of the NGR because the accommodation at these sites enables necessary activities to maintain and improve the safety of reference services, maintain the integrity of reference services and comply with GGT's regulatory obligations or requirements. GGT stated that there was no suitable accommodation in Wiluna for employees requiring access to the compressor station.

[213] Real dollars at 31 December 2018.

[214] Real dollars at 31 December 2018.

531. It was not clear, however, that the proposed costs of the upgrade program were in line with the amount that would be incurred by a prudent service provider acting efficiently, as is required by rule 79(1)(a) of the NGR.

532. The design of the sites and the scope of work were preliminary. Compared to the costs for upgrade of another remote site conducted in AA2, the ERA considered that the proposed costs were not efficient. During the second access arrangement period GGT incurred approximately $1.44 million to upgrade the accommodation at the Yarraloola site, $1.15 million of which was allocable to the covered pipeline. The proposed cost of approximately $[redacted] million per site for the AA4 work exceeds the cost per site incurred during AA2.[215]

533. The draft decision capital expenditure forecast included $2.222 million of capital expenditure for the site accommodation upgrade program, which equated to approximately $1.111 million of capital expenditure per site.[216] This adjustment was derived by reducing GGT's cost estimate by 20 per cent due to the preliminary nature of GGT's estimate, which was not considered to represent the best forecast or estimate possible in the circumstances as required by rule 74(2)(b) of the NGR, and in light of GGT's history of overestimating its capital expenditure forecasts. The resulting $1.111 million of capital expenditure per site was close to the actual costs incurred by GGT and allocated to the covered pipeline for upgrading the accommodation at the Yarraloola site during the second access arrangement period ($1.15 million). The adjustment was applied to the proposed capital expenditure for the site accommodation program, which was allocated to the covered pipeline according to the cost allocation method outlined at paragraph 325. The $2.222 million capital expenditure for the 'site accommodation upgrade' program included in the draft decision capital expenditure forecast was therefore considered to satisfy rule 79(1)(c) of the NGR. Based on this and the conclusions in paragraphs 530 and 532, the ERA considered that $2.222 million of capital expenditure for the site accommodation upgrade program satisfied the criteria for conforming capital expenditure.

534. As shown in Table 52, the proposed AA4 expenditure for the Karratha maintenance base rebuild was $0.104 million.[217]

535. The proposed expenditure for the Karratha maintenance base rebuild covered remedial action for damages to the GGP's Karratha maintenance base to ensure the building was suitable for continued occupancy. The proposed remediation addressed a safety risk to employees and visitors if the building continued to deteriorate.

536. GGT's proposed costs for the Karratha maintenance base rebuild were based on a cost estimate from a vendor.

537. The work on the rebuild began in 2019 and was expected to be completed in 2020. The total cost of the project was estimated to be $0.420 million, which was approximately 40 per cent less than GGT's initial AA3 forecast for the work.[218]

215 All figures are stated in real dollars at 31 December 2018.

216 Real dollars as at 31 December 2018.

217 Real dollars at 31 December 2018.

218 Real dollars at 31 December 2018.

538. The ERA considered that the proposed Karratha maintenance base rebuild expenditure would maintain and improve the safety of pipeline services and was therefore justifiable capital expenditure according to rule 79(2)(c) of the NGR.

539. The total proposed amount for the Karratha maintenance base rebuild was in line with what would be incurred by a prudent service provider acting efficiently, as required by rule 79(1)(a) of the NGR.

540. The total proposed amount of $0.104 million for the Karratha maintenance base rebuild in AA4 was the capital expenditure allocated to the covered pipeline. This allocation was estimated in line with the cost allocation method outlined at paragraph 325 and therefore the ERA concluded that the proposed capital expenditure satisfied rule 79(1)(c) of the NGR.

541. Based on the conclusions stated at paragraphs 538 to 540, the proposed capital expenditure for the Karratha maintenance base rebuild satisfied the criteria for conforming capital expenditure set out in rule 79(1) of the NGR. The draft decision capital expenditure forecast therefore included $0.104 million of capital expenditure for the Karratha maintenance base rebuild.[219]

Equity raising costs

542. Equity raising costs reflect the direct transaction costs of raising equity. Equity is assumed to be raised to fund a capital investment program and is used to maintain the benchmark gearing assumption adopted.

543. GGT's initial proposal did not include any equity raising costs in the capital expenditure building block for AA4. In the draft decision the ERA also calculated that no equity raising costs were required based on the adjusted revenue and tariff forecasts in the draft decision. GGT submitted in its revised proposal that the ERA's draft decision tariff model included some modelling errors affecting the AA4 projected capital base.

Working capital (non-depreciable assets)

544. Working capital refers to a stock of funds that must be maintained by a service provider to pay costs as they fall due. In circumstances where the costs of providing services occurs before the revenues from the provision of services are received, a stock of working capital may be needed as part of the capital investment in the business. The cost of this stock of working capital (that is, the required return on the capital investment) is a cost to the service provider of operating its business and providing services.

545. The NGL and NGR do not reference the cost of working capital used by a service provider. Rule 76 of the NGR states that total revenue is to be determined for each regulatory year of the access arrangement period using the building block approach.

546. GGT included working capital as a separate line item, non-depreciable assets, in its projected capital base. GGT did not propose any additions to working capital during AA4. Consequently, the amount of working capital included in the regulatory asset base would be unchanged from the amount of working capital included in the regulatory asset base during AA3. The ERA evaluated this approach and alternative approaches to forecasting working capital and concluded that the approach proposed by GGT was reasonable. The working capital proposed by GGT was calculated

[219] Real dollars as at 31 December 2018.

consistent with the method used in prior access arrangement periods. The ERA accepted, in principle, that an allowance for working capital was to be included in the capital base upon which a return may be earned through the reference tariffs but working capital should not be subject to depreciation.[220] GGT continued to apply this method and calculated the amount of working capital accordingly. GGT's proposed working capital was therefore included in the draft decision regulatory asset base for AA4.

Conclusion

547. Following the assessment of GGT's proposed conforming AA4 capital expenditure (paragraphs 455 to 541), the ERA determined that:

- $6.429 million (59.85 per cent of GGT's proposed expenditure) complied with the criteria set out in rule 79 of the NGR and could be included in the projected capital base for AA4.[221]
- $4.314 million (40.15 per cent of GGT's proposed expenditure) did not comply with the criteria set out in rule 79 of the NGR and should not be included in the projected capital base for AA4.[222]

548. Table 53 shows the capital expenditure which was included in the draft decision capital expenditure forecast by asset class.

[220] Economic Regulation Authority, 17 May 2005, *Final Decision on the Proposed Access Arrangement for the Goldfields Gas Pipeline*, p. 52, paragraph 234.

[221] Real dollars as at 31 December 2018.

[222] Real dollars as at 31 December 2018.

Table 53 Draft decision AA4 capital expenditure forecast ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024	AA4 total
Pipeline and laterals						
Verification digs program	0.214	-	-	-	-	0.214
Preparation for in-line inspection	-	-	-	-	-	-
Labour escalation adjustment	(0.001)	-	-	-	-	(0.001)
Compressor stations						
Gas engine alternator 60,000hrs overhaul program	-	0.114	0.076	-	-	0.190
Preparation for in-line inspection	0.500	-	0.309	-	0.521	1.330
Hazardous areas rectification program	0.050	0.050	0.050	0.050	-	0.200
Labour escalation adjustment	(0.001)	(0.001)	(0.003)	-	(0.005)	(0.010)
Receipt and delivery point facilities						
Flow computer upgrade programme	0.066	0.409	-	-	-	0.475
Gas chromatograph replacement program	0.083	0.204	0.082	-	-	0.369
Labour escalation adjustment	(0.001)	(0.004)	(0.001)	-	-	(0.005)
SCADA, communications and electronic equipment						
Remote terminal unit replacement program	0.217	0.092	0.167	0.430	0.321	1.226
Labour escalation adjustment	(0.001)	-	(0.001)	(0.005)	(0.004)	(0.011)
Cathodic protection						
CPU upgrade program	-	-	-	-	-	-
Labour escalation adjustment	-	-	-	-	-	-
Maintenance bases and depots						
Site accommodation upgrade program	2.046	0.176	-	-	-	2.222
Karratha maintenance base rebuild	0.104	-	-	-	-	0.104
Labour escalation adjustment	(0.008)	(0.001)	-	-	-	(0.009)
Total AA4 draft decision forecast capital expenditure	**3.269**	**1.038**	**0.679**	**0.475**	**0.832**	**6.293**

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 105, Table 40.

549. Table 54 shows the ERA's amended values for calculation of the projected capital base for AA4 in nominal terms.

Table 54 Revised AA4 capital expenditure forecast ($ million nominal)

	2020	2021	2022	2023	2024	AA4 total
Pipeline and laterals						
Verification digs program	0.222	-	-	-	-	0.222
Preparation for in-line inspection	-	-	-	-	-	-
Labour escalation adjustment	(0.001)	-	-	-	-	(0.001)
Compressor stations						
Gas engine alternator 60,000hrs overhaul program	-	0.121	0.081	-	-	0.202
Reliability replacement program	0.519	-	0.333	-	0.582	1.434
Hazardous areas rectification program	0.052	0.053	0.054	0.055	-	0.213
Labour escalation adjustment	(0.001)	(0.001)	(0.003)	-	(0.006)	(0.011)
Receipt and delivery point facilities						
Flow computer upgrade program	0.068	0.432	-	-	-	0.501
Gas chromatograph replacement program	0.086	0.216	0.089	-	-	0.391
Labour escalation adjustment	(0.001)	(0.004)	(0.001)	-	-	(0.006)
SCADA, communications and electronic equipment						
Remote terminal unit replacement program	0.225	0.097	0.179	0.471	0.359	1.332
Labour escalation adjustment	(0.001)	-	(0.001)	(0.005)	(0.005)	(0.012)
Cathodic protection						
CPU upgrade program	-	-	-	-	-	-
Labour escalation adjustment	-	-	-	-	-	-
Maintenance bases and depots						
Site accommodation upgrade program	2.124	0.186	-	-	-	2.310
Karratha maintenance base rebuild	0.108	-	-	-	-	0.108
Labour escalation adjustment	(0.008)	(0.001)	-	-	-	(0.009)
Total AA4 revised forecast capital expenditure	**3.392**	**1.098**	**0.732**	**0.521**	**0.930**	**6.672**

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 107, Table 41.

550. Table 55 shows the ERA's amended values for calculating the projected capital base for AA4.

Table 55 ERA's amended projected capital base for AA4 ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024
Opening capital base	362.929	355.704	345.332	334.572	323.589
Plus: Capital expenditure	3.221	0.991	0.633	0.429	0.787
Less: Depreciation	10.446	11.363	11.393	11.411	10.428
Less: Asset disposals	0.000	0.000	0.000	0.000	0.000
Closing capital base	355.704	345.332	334.572	323.589	313.949

Note: The real values of capital expenditure shown in Table 55 for 2020 to 2024 differ from the real values of Total AA4 draft decision capital expenditure shown in Table 53. The differences in each year are due to the changes in non-depreciable assets (working capital) in those years. The real value of non-depreciable assets was reduced in the forecast for each of these years to maintain the nominal value of GGT's working capital included in GGT's regulatory asset base, consistent with the approach the ERA has accepted for calculating the working capital in the draft decision (see paragraph 546).

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, p. 108, Table 42.*

551. The straight-line method was the depreciation method used for calculating the depreciation on GGT's regulatory asset base for AA3. The current cost accounting approach is consistent with the criteria under rule 89(1) of the NGR and complies with the NGL.

552. Table 56 shows the ERA's amended values for calculating the projected capital base for AA4 in nominal dollars.

Table 56 ERA's amended projected capital base for AA4 ($ million nominal)

	2020	2021	2022	2023	2024
Opening capital base	367.575	364.868	358.763	352.034	344.836
Inflation	4.705	4.670	4.592	4.506	4.414
Opening capital base (end of period)	372.280	369.538	363.356	356.540	349.250
Plus: Capital expenditure	3.304	1.030	0.666	0.457	0.849
Less: Depreciation	10.715	11.805	11.988	12.160	11.254
Less: Asset disposals	0.000	0.000	0.000	0.000	0.000
Closing capital base	364.868	358.763	352.034	344.836	338.845

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, p. 108, Table 43.*

Draft Decision Required Amendment 5

GGT must amend the projected capital base to reflect the values set out in Table 43 of [the] draft decision. [Table 52 of this final decision]

GGT's response to the draft decision

553. GGT's revised proposed projected capital base for AA4 is shown in Table 57.

Table 57 GGP revised proposed AA4 capital base ($ million nominal)

	2020	2021	2022	2023	2024
Opening capital base	373.796	370.952	364.677	357.765	350.382
Inflation adjustment	4.785	4.748	4.668	4.579	4.485
Opening capital base (end of period)	378.580	375.700	369.345	362.345	354.867
Plus: capital expenditure	3.303	1.030	0.665	0.457	0.850
Less: indexed straight line depreciation	10.931	12.053	12.246	12.420	11.479
Less: asset disposals	0.000	0.000	0.000	0.000	344.238
Closing asset value	370.952	364.677	357.765	350.382	344.238

Source: GGT, 11 September 2019, Access Arrangement Revision Proposal Response to ERA Draft Decision Submission, *p. 7, Table 5.*

554. In its revised proposal, GGT amended its proposed AA4 capital expenditure in accordance with the forecast capital expenditure which the ERA accepted in the draft decision as conforming capital expenditure under rule 79 of the NGR. However, GGT's revised proposed capital base for AA4 differed from the values specified by draft decision required amendment 5 due to some corrections to the calculation of the capital base applied by GGT.

555. The corrections to the calculation of the capital base applied by GGT to derive the values shown in Table 57 were:[223]

- The difference between the opening capital base as of 1 January 2020 calculated by GGT and the draft decision value for the opening capital base as of 1 January 2020 reflects the correction applied by GGT to calculate its revised proposal for the value of the opening capital base as of 1 January 2015 outlined in paragraph 442. This difference flows through to GGT's calculated value of the opening capital base as of 1 January 2020.
- The differences between the depreciation values shown in Table 57 and the depreciation specified by required amendment 4 of the draft decision reflect the corrections applied by GGT to calculate the value of the capital base during AA3 outlined in paragraph 442. These differences flow through to GGT's calculated value of the opening capital base as of 1 January 2020.

Final decision

556. As outlined at paragraphs 553 to 555, GGT accepted the draft decision conclusions on its proposed AA4 capital expenditure, but calculated a different value for its projected capital base for AA4 due to proposed amendments to the modelling of

[223] GGT, 11 September 2019, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission,* p. 7.

depreciation and the value of the AA4 opening capital base applied in the draft decision.

557. The ERA's final decision on capital expenditure forecasts maintains the position in the ERA's draft decision on the projects and forecast expenditure amounts for those projects which are conforming capital expenditure according to rule 79 of the NGR.

558. The final decision capital expenditure forecast also reflects a revised labour escalation rate. The labour escalation rate applied in deriving the final decision capital expenditure forecast for AA4 is 0.54 per cent. The labour escalation rate applied in deriving the draft decision capital expenditure forecast was 0.55 per cent. The final decision labour escalation rate reflects the same Wage Price Index and Consumer Price Index growth data as applied in the draft decision, however, the formula for deriving the labour escalation rate has been corrected. For the draft decision the real labour escalation growth rate was derived as the growth in the average WPI minus the growth in the average CPI (with the averages being based on estimated actual data for the indices for 2018/19, budget estimates for 2019/20 and forward estimates for 2020/21, 2021/22 and 2022/23). In this final decision the ERA has derived the labour escalation rate using the same data, however, the ERA applies the following formula to more accurately reflect that the real labour escalation rate is the growth in wages in excess of the CPI over time:

$$Real\ labour\ escalation\ growth\ rate\ \% = \frac{1 + Average\ growth\ in\ WPI}{1 + Average\ growth\ in\ CPI} - 1$$

Table 58 Wage Price Index and Consumer Price Index data applied for calculating the real labour cost escalation applied to the final decision AA4 capital expenditure forecast (%)

	2018/19 (estimated actual)	2019/20 (budget estimate)	2020/21 (forward estimate)	2021/22 (forward estimate)	2022/23 (forward estimate)	Average
Western Australian WPI	1.75	2.25	2.75	3.00	3.25	2.60
Western Australian CPI	1.25	1.75	2.25	2.50	2.50	2.05

Source: WA Department of Treasury, Economic Forecasts – Major Economic Aggregates *(online) [accessed 26 November 2019]*

559. The ERA has reviewed GGT's proposed changes to the modelling of its AA4 projected capital base (outlined at paragraph 555) and considers that these changes satisfy rule 78 of the NGR. The ERA has therefore applied the changes proposed by GGT to calculate the projected capital base for AA4 for this final decision.

560. GGT's revised proposal did not include any forecast equity raising costs in the capital expenditure building block for AA4, however, the ERA has calculated that equity raising costs are required based on the adjusted revenue and tariff forecasts in the final decision. In determining whether equity funding is required the ERA used the formula below.

Equity Required = Capital expenditure – Debt component of the capital expenditure – (retained cash flow – dividend payout + dividend reinvestment)

561. The equity raising cost is the sum of external equity raising cost and dividend reinvestment cost. When equity raising costs are greater than zero they are capitalised, otherwise the equity raising cost is zero.

562. In this final decision the ERA provides an allowance for equity raising costs. Equity raising costs are capitalised and incorporated into capital expenditure allowances, which are then recovered over time. Equity raising costs do not form part of the rate of return.

563. The equity raising costs included in the final decision operating expenditure forecast are shown in Table 59 (in real dollars as at 31 December 2018) and Table 60 (in real nominal dollars).

564. The ERA corrected an error in the financial modelling of the working capital (non-depreciable assets) included in GGT's AA4 capital base for the AA4 draft decision. The ERA's intention in the draft decision was that the amount of non-depreciable assets would be unchanged from the AA3 final decision. However, non-depreciable assets in the draft decision had a small decrease in real dollar terms each year. The ERA has now corrected the calculation by converting the amount of non-depreciable assets from the AA3 final decision of $3.823 million (real dollars as at 31 December 2014) to $4.092 million (real dollars as at 31 December 2018) for each of year of AA3.

565. Table 59 shows the capital expenditure which is included in the final decision capital expenditure forecast by asset class in real dollars as at 31 December 2018.

Table 59 Final decision - AA4 capital expenditure forecast ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024	AA4 total
Pipeline and laterals						
Verification digs program	0.213	-	-	-	-	**0.213**
Preparation for in-line inspection	0	0	0	0	0	**0**
Labour escalation adjustment	(0.000)	0	0	0	0	**(0.000)**
Compressor stations						
Gas engine alternator 60,000hrs overhaul program	-	0.114	0.076	-	-	**0.189**
Reliability replacement program	0.500	-	0.309	-	0.520	**1.329**
Hazardous areas rectification program	0.050	0.050	0.050	0.050	0	**0.200**
Labour escalation adjustment	(0.001)	(0.000)	(0.002)	(0.000)	(0.005)	**(0.009)**
Receipt and delivery point facilities						
Flow computer upgrade programme	0.066	0.408	-	-	-	**0.474**
Gas chromatograph replacement program	0.083	0.204	0.082	-	-	**0.369**
Labour escalation adjustment	(0.000)	(0.003)	(0.001)	-	-	**(0.004)**
SCADA, communications and electronic equipment						
Remote terminal unit replacement program	0.217	0.092	0.166	0.429	0.321	**1.225**
Labour escalation adjustment	(0.000)	(0.000)	(0.001)	(0.004)	(0.004)	**(0.010)**
Cathodic protection						
CPU upgrade program	0	0	0	0	0	**0**
Labour escalation adjustment	-	-	-	-	-	**-**
Maintenance bases and depots						
Site accommodation upgrade program	2.045	0.176	-	-	-	**2.221**
Karratha maintenance base rebuild	0.104	-	-	-	-	**0.104**
Labour escalation adjustment	(0.004)	(0.001)	-	-	-	**(0.005)**
Equity raising costs	0.017	0	0	0	0	**0.017**
Total AA4 final decision forecast capital expenditure	**3.288**	**1.039**	**0.680**	**0.475**	**0.832**	**6.315**

Source: ERA, December 2019, *Final decision tariff model*.

566. Table 60 shows the capital expenditure which is included in the final decision capital expenditure forecast by asset class in nominal dollars. The values in Table 60 reflect a different inflation rate to the rate applied in the draft decision capital expenditure forecast for AA4 (reproduced as Table 54 in this final decision).

Table 60 Final decision - AA4 capital expenditure forecast ($ million nominal)

	2020	2021	2022	2023	2024	AA4 total
Pipeline and laterals						
Verification digs program	0.218	-	-	-	-	0.218
Preparation for in-line inspection	0	0	0	0	0	0
Labour escalation adjustment	(0.000)	0	0	0	0	(0.000)
Compressor stations						
Gas engine alternator 60,000hrs overhaul program	-	0.118	0.079	-	-	0.197
Reliability replacement program	0.511	-	0.323	-	0.557	1.391
Hazardous areas rectification program	0.051	0.052	0.052	0.053	0	0.208
Labour escalation adjustment	(0.001)	(0.000)	(0.002)	(0.000)	(0.005)	(0.009)
Receipt and delivery point facilities						
Flow computer upgrade programme	0.067	0.422	-	-	-	0.490
Gas chromatograph replacement program	0.085	0.211	0.086	-	-	0.382
Labour escalation adjustment	(0.000)	(0.003)	(0.001)	-	-	(0.004)
SCADA, communications and electronic equipment						
Remote terminal unit replacement program	0.222	0.095	0.174	0.454	0.343	1.289
Labour escalation adjustment	(0.000)	(0.000)	(0.001)	(0.004)	(0.004)	(0.010)
Cathodic protection						
CPU upgrade program	0	0	0	0	0	0
Labour escalation adjustment	-	-	-	-	-	-
Maintenance bases and depots						
Site accommodation upgrade program	2.091	0.182	-	-	-	2.274
Karratha maintenance base rebuild	0.106	-	-	-	-	0.106
Labour escalation adjustment	(0.004)	(0.001)	-	-	-	(0.005)
Equity raising costs	0.018	0	0	0	0	0.018
Total AA4 final decision forecast capital expenditure	**3.364**	**1.075**	**0.711**	**0.503**	**0.891**	**6.544**

Source: ERA, December 2019, *Final decision tariff model*.

567. Table 61 shows the ERA's final decision values for calculating the projected capital base for the fourth access arrangement period. The ERA requires that the opening capital base at 1 January 2020 be amended to $376.959 million.

Table 61 Final decision - Projected capital base for AA4 ($ million nominal)

	2020	2021	2022	2023	2024
Opening capital base (beginning of period)	377.206	373.868	367.098	359.709	351.869
Inflation	4.300	4.262	4.185	4.101	4.011
Opening capital base (end of period)	381.506	378.130	371.283	363.810	355.880
Plus: Capital expenditure	3.364	1.075	0.711	0.503	0.891
Less: Depreciation	11.002	12.107	12.285	12.444	11.487
Less: Asset disposals	0	0	0	0	0
Plus: Non-depreciable asset variation	0	0	0	0	0
Closing capital base	373.868	367.098	359.709	351.869	345.284

Source: ERA, December 2019, Final decision tariff model.

Required Amendment 4

The projected capital base must reflect the values in Table 61 of this final decision.

Speculative capital expenditure

568. Rule 84 of the NGR states that a full access arrangement may include a speculative capital expenditure account.

> **84 Speculative capital expenditure**
>
> (1) A full access arrangement may provide that the amount of non-conforming capital expenditure, to the extent that it is not to be recovered through a surcharge on users or a capital contribution, is to be added to a notional fund (the speculative capital expenditure account).
>
> (2) The balance of the speculative capital expenditure account must be adjusted annually by applying to the balance a rate that is the same as the allowed rate of return for the regulatory year in which the adjustment is made.
>
> (3) If at any time the type or volume of services changes so that capital expenditure that did not, when made, comply with the new capital expenditure criteria becomes compliant, the relevant portion of the speculative capital expenditure account (including the return referable to that portion of the account) is to be withdrawn from the account and rolled into the capital base as at the commencement of the next *access arrangement period.*

GGT's initial proposal

569. As stated at paragraph 336, GGT requested that $0.064 million of capital expenditure that it estimated was incurred during 2018 for one project – additional capacity

feasibility load financial year 2018 – be included as speculative capital expenditure in a speculative capital expenditure account.[224] The estimated $0.064 million capital expenditure for this project during AA3 was for preliminary engineering design work on a possible expansion of the GGP and initial investigations into the land access issues which might arise if such expansion was to proceed. GGT advised that, at the date of submission of the access arrangement revision proposal for AA4, there was insufficient commitment to capacity development for GGT to propose an expansion of the GGP.

570. The initial proposed speculative capital expenditure is shown in Table 62.

Table 62 Proposed speculative capital expenditure for AA3 ($ million nominal)

Project	2015	2016	2017	2018	2019	AA3 total
Additional capacity feasibility load financial year 2018 (39009)	-	-	-	0.064	-	0.064
Total proposed speculative capital expenditure	**-**	**-**	**-**	0.064	**-**	0.064

Source: Based on Goldfields Gas Transmission Pty Ltd, 18 July 2019, Response to information request ERA 7.

Draft decision

571. The capital expenditure for the additional capacity feasibility load financial year 2018 project was for an expansion of the pipeline. The ERA considered that the capital expenditure was not justifiable capital expenditure because it was not necessary for any of the reasons outlined in rule 79(2)(c) of the NGR and therefore did not satisfy rule 79(1)(b). Rule 79(1)(b) is one of the criteria for conforming capital expenditure and must be satisfied, in addition to the criteria for conforming capital expenditure set out in rule 79(1)(a) and rule 79(1)(c), for capital expenditure to be included in a service provider's capital base. The ERA therefore concluded that the capital expenditure for the additional capacity feasibility load project was non-conforming capital expenditure.

572. As the capital expenditure for the additional capacity feasibility load project was non-conforming capital expenditure and could not be recovered through a surcharge on users or a capital contribution, it may be added to a speculative capital expenditure account, according to rule 84(1) of the NGR.

573. Rule 84(3) states that if non-conforming capital expenditure included in a speculative capital expenditure becomes compliant, the relevant portion of the speculative capital expenditure account (including the return referable to that portion of the account) is to be withdrawn from the account and rolled into the capital base as at the commencement of the next access arrangement period.

574. The ERA considered that the capital expenditure for the additional capacity feasibility load project may become conforming capital expenditure if an expansion of the pipeline was made.

[224] Nominal dollars.

575. Given that the capital expenditure for the additional capacity feasibility load project may become conforming capital expenditure, the ERA concluded that the capital expenditure GGT estimated was incurred for this project during AA3 could be included in a speculative capital expenditure account. The ERA stated in the draft decision that, should GGT propose to roll this capital expenditure into the capital base, the ERA would at that time need to determine whether the capital expenditure satisfied all the criteria for conforming capital expenditure set out in rule 79(1) of the NGR.[225]

576. According to rule 84(2) of the NGR, the balance of the speculative capital expenditure account must be adjusted annually by applying to the balance a rate that is the same as the allowed rate of return for the regulatory year in which the adjustment is made.

577. In the draft decision, the ERA determined that the allowed rate of return in 2019 was 5.63 per cent. This is the rate of return which would be applied to adjust the balance of the speculative capital expenditure account in 2019, the final year of AA3. GGT submitted that the estimated capital expenditure for the additional capacity feasibility load project would have been incurred in 2018 only and therefore no adjustments were necessary to the balance of the speculative capital expenditure account for years prior to 2019.

578. Based on the discussion and conclusions outlined at paragraphs 569 to 577, in the draft decision the ERA determined that the balance of the speculative capital expenditure account for AA3 was as shown in Table 63. The ERA required GGT to incorporate a speculative capital expenditure account into the access arrangement:

> **Draft Decision Required Amendment 6**
>
> GGT must incorporate a speculative capital expenditure account into the access arrangement. The speculative capital expenditure account for AA3 will reflect the closing balance shown in Table 45 [of the draft decision]. [Table 63 of this final decision]

Table 63 Draft decision - Speculative capital expenditure account balance AA3 ($ million nominal)

	2015	2016	2017	2018	2019
Opening balance	-	-	-	-	0.064
Speculative capital expenditure	-	-	-	0.064	-
Adjustment – Allowed rate of return on opening balance	-	-	-	-	0.004
Closing balance	-	-	-	0.064	0.068

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 110, Table 45.

GGT's response to the draft decision

579. GGT accepted draft decision required amendment 6 and incorporated a speculative capital expenditure account into a new section, section 3.6, of its revised proposed

[225] ERA, 31 July 2019, *Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, p. 56, paragraph 474.

access arrangement, reflecting the closing balance shown in Table 45 of the draft decision.[226]

580. Subsequent to submitting its revised proposed access arrangement, GGT advised that its actual capital expenditure in 2018 for the additional capacity feasibility load project financial year 2018 was $0.058 million.[227] This is $0.006 million less than the forecast amount.

Final decision

581. GGT's revised proposal incorporated required amendment 6 from the draft decision, which added a speculative capital expenditure account into GGT's access arrangement for AA4 reflecting the closing balance value specified in the draft decision. There were no submissions from interested parties on the inclusion of a speculative capital expenditure account in GGT's revised access arrangement or the closing balance of the account.

582. The ERA maintains the position in its draft decision that the inclusion of a speculative capital expenditure account in GGT's revised access arrangement is consistent with rule 84 of the NGR.

583. The ERA concludes that the closing value of the account as at 31 December 2019 is $0.061 million. This comprises the $0.058 million GGT actually incurred for the additional capacity feasibility load financial year 2018 project during AA3 and an adjustment reflecting the allowed rate of return (at a rate of 5.63 per cent for 2019) on this expenditure in 2019.

584. For this final decision, the ERA included the actual amount of the expenditure for the additional capacity feasibility load project in the speculative capital expenditure account, rather than the forecast amount on which the draft decision value for the speculative capital expenditure account was based. The ERA considers that using the actual amount is consistent with rule 74(2) of the NGR, as the actual amount represents the best forecast or estimate possible in the circumstances. Given that the actual expenditure for the additional capacity feasibility load project was lower than the estimated amount and the actual amount is known at the time of making this final decision, including the estimated amount in the speculative capital expenditure account would not be in the long-term interest of consumers, as required by the national gas objective, and the ERA has therefore included the actual amount of the expenditure for this project in the account for this final decision. The ERA considers that the $0.061 million closing value of GGT's speculative capital expenditure account has been calculated in accordance with rule 84 of the NGR.

585. The speculative capital expenditure account for AA3 will reflect the closing balance shown in Table 64.

[226] GGT, 11 September 2019, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission,* p. 8.

[227] Nominal dollars. GGT, 28 November 2019, *Response to information request ERA 15.*

Table 64 Final decision - Speculative capital expenditure account balance for AA3 ($ million nominal)

	2015	2016	2017	2018	2019
Opening balance	-	-	-	-	0.058
Speculative capital expenditure	-	-	-	0.058	-
Adjustment – Allowed rate of return on opening balance	-	-	-	-	0.003
Closing balance	-	-	-	0.058	0.061

Required Amendment 5

Section 3.6 of the access arrangement must be amended to incorporate the values for the speculative capital expenditure account in Table 64 of this final decision.

Return on the regulatory capital base

Rate of return

586. The rate of return, based on the Weighted Average Cost of Capital (WACC), provides for a return on the regulatory asset base. Rule 87 of the NGR requires the ERA to make and publish rate of return guidelines. Rule 87(14) of the NGR details that the guidelines must set out:

- The methods that the ERA proposes to use to estimate the allowed rate of return.
- The estimation methods, financial models, market data and other evidence the ERA proposes to take into account to estimate the return on equity, return on debt and value of imputation credits referred to in rule 87A.

587. The ERA was required to complete a review of the 2013 rate of return guidelines by December 2018. Draft updated guidelines and a draft explanatory statement were published on 29 June 2018 for public comment. The ERA considered the submissions received before making and publishing final updated guidelines in December 2018.

588. This review allowed the ERA to assess its approach to setting the rate of return for covered gas pipeline access arrangements.

589. Where relevant, as a means of illustration, the ERA set out indicative estimates of the rate of return and associated parameters in the guidelines. However, the specific values arising from the application of the ERA's approach to estimating the rate of return will be determined at each access arrangement review by applying the approaches set out in the rate of return guidelines.

590. Further information about the rate of return guidelines and relevant documents can be found on the ERA website.[228]

[228] ERA, Gas Rate of Return Guidelines (online) (accessed November 2019).

Application of the guidelines

591. The Council of Australian Governments' Energy Council developed a framework for binding rate of return guidelines.[229] New rate of return rules were gazetted in the South Australian government gazette in November 2018. In April 2019, the rate of return guidelines became a binding instrument in Western Australia.[230] The ERA and service providers may no longer depart from the guidelines when reviewing an access arrangement.

592. GGT acknowledged that the rate of return guidelines would become a binding instrument.

GGT's initial proposal

593. GGT's proposed estimate of the rate of return was 5.56 per cent (vanilla nominal after-tax) and was based on GGT's assumption that the ERA's Rate of Return Guideline (2018) as a binding rate of return instrument would come into effect in late 2018 or early in 2019. Table 65 details the individual rate of return components initially proposed by GGT for AA4 compared to the existing rate of return components for AA3.

[229] COAG Energy Council, October 2017, *Binding Rate of Return Guideline* (online) (accessed November 2019).

AER, July 2017, *Consultation paper: Process for reviewing the rate of return guidelines*, p. 7.

[230] Government Gazette Western Australia, 5 April 2019, *National Gas Access (WA) (Act Amendment) Regulations 2019*, pp. 1009-1010.

Table 65: GGT's rate of return estimate

Component	AA3 actual*	AA4 proposed
Return on debt (%)		
5-year interest rate swap (effective yield)	2.12	2.31
Debt risk premium (10-year average)	2.365	2.315
Debt issuing cost + hedging cost	0.239	0.214
Nominal return on debt	*4.72*	*4.84*
Return on equity		
Nominal risk-free rate (%)	1.82	2.25
Market risk premium (%)	7.40	6.00
Equity beta	0.7	0.7
Nominal return on equity (%)	*7.00*	*6.45*
Other parameters		
Debt proportion (%)	60	55
Inflation rate (%)	1.46	1.87
Corporate tax rate (%)	30	30
Franking credit	0.4	0.5
Nominal after-tax WACC (%)	**5.63**	**5.56**
Real after-tax WACC (%)	4.11	3.63

** Based on 2018 debt risk premium values.*

Source: GGT, 1 January 2019 (submitted 21 December 2018), Proposed Revised Access Arrangement Information, p. 19, Table 12.

Draft decision

594. To determine the 2018 rate of return guidelines, the ERA considered all available information including GGT's submissions throughout the rate of return guideline review process, other public submissions and expert reports. These considerations are outlined in the ERA's rate of return guidelines explanatory statement.[231]

595. As indicated at paragraph 591, in April 2019, the 2018 rate of return guidelines became a binding instrument in Western Australia.[232]

596. The ERA's draft decision was consistent with the binding gas rate of return guidelines.

231 ERA, 18 December 2018, *Final Gas Rate of Return Guidelines Explanatory Statement*.

232 *National Gas Access (WA) (Act Amendment) Regulations 2019*, Western Australian Government Gazette, No.43, 5 April 2019, pp.1009-1010.

Overall rate of return approach

597. The rate of return, based on a WACC, provides a service provider with a return on the capital it has invested in its business.

598. The NGR require the ERA to adopt a "nominal vanilla" WACC to develop the rate of return for the benchmark efficient entity.[233] A vanilla WACC does not include any adjustment for tax impacts, such as the effect of imputation credits on the rate of return. The effect of tax on the returns must be accounted for separately, as an explicit deduction from the relevant cash flows. A vanilla WACC is therefore a post-tax framework.

599. In the draft decision, the ERA stated that it would adopt a WACC for a benchmark efficient entity in its simplest 'vanilla' form, expressed as:

$$WACC_{vanilla} = E(r_e)\frac{E}{V} + E(r_d)\frac{D}{V}$$

where

$E(r_e)$ is the expected return on equity

$E(r_d)$ is the expected return on debt

E/V is the proportion of equity in total financing (comprising equity and debt)

D/V is the proportion of debt in total financing.

Return on debt approach

600. The estimate of the return on debt is based on a risk premium over and above the risk free rate, combined with an additional margin for administrative costs:

Return on debt = risk free rate + debt risk premium + debt raising costs + hedging costs

Risk free rate (debt)

601. The risk free rate is the return an investor would expect when investing in an asset with no risk.

602. The interbank rate can represent a risk free rate for the purposes of debt financing. Though interbank lending has a cost above that of Commonwealth Government Securities used to calculate the cost of equity, the use of the interbank rate is equivalent to using a Government Security and separately adjusting the debt risk premium. For the purposes of determining the cost of debt, the use of the interbank rate is more convenient for businesses and regulators. The ERA therefore considered the five-year bank bill swap rate as a proxy for the risk free rate when calculating the cost of debt.

603. The ERA used the 20-day averaging period to 29 March 2019 as a placeholder and noted that the final decision would be updated for GGT's final averaging period.

[233] National Gas Rules, rule 87(4).

604. For the draft decision, the ERA estimated a risk free rate for the cost of debt of 1.86 per cent for the 20-day averaging period to 29 March 2019.

Debt risk premium

605. The debt risk premium is the return above the risk free rate that lenders require to compensate them for the risk of providing debt funding to a benchmark business. The debt risk premium compensates holders of debt securities for the possibility of default by the issuer.

606. The ERA's approach to estimating the debt risk premium involved the following steps:

- Step 1: Determining the benchmark sample – identifying a sample of relevant corporate bonds that reflect the credit rating of the benchmark efficient entity.
- Step 2: Collecting data and converting yields to Australian dollar equivalents – converting the bond yields from the sample into hedged Australian dollar equivalent yields inclusive of Australian swap rates.
- Step 3: Averaging yields over the averaging period – calculating an average Australian dollar equivalent bond yield for each bond across the averaging period.
- Step 4: Estimating curves – estimating yield curves on this data by applying the Gaussian Kernel, Nelson-Siegel and Nelson-Siegel-Svensson techniques.
- Step 5: Estimating cost of debt – calculating the simple average of their three yield curves' 10-year cost of debt to arrive at a market estimate of the 10-year cost of debt.
- Step 6: Calculating the debt risk premium – calculating the debt risk premium by subtracting the 10-year interest rate swap rate from the 10-year cost of debt.

607. These steps determined the debt risk premium at a point in time, being the date of calculation. The ERA referred to this method as the revised bond yield approach. This approach uses international and domestic BBB+ bonds, identified by Bloomberg as having Australia as their country of risk, to estimate the cost of debt each year.

608. To determine the debt risk premium used to calculate the rate of return, the ERA constructed a 10-year trailing average debt risk premium, consisting of a debt risk premium for the current year and a debt risk premium for each of the nine prior years.

609. The 10-year trailing average debt risk premium is updated each year. The detailed process for the debt risk premium is provided in the 2018 gas rate of return guidelines explanatory statement.[234]

610. Table 66 details the ERA's estimated trailing average debt risk premium for the draft decision (being 2.316 per cent). Historic annual debt risk premium estimates are unchanged. The current year was updated for the 20-day averaging period to 29 March 2019, as a placeholder.

[234] ERA, 18 December 2018, *Final Gas Rate of Return Guidelines Explanatory Statement*, Chapter 10.

Table 66: ERA's draft decision estimated trailing average debt risk premium for AA4

Year	Debt risk premium (%)
2011	2.379
2012	3.168
2013	3.043
2014	2.251
2015	2.070
2016	2.582
2017	2.553
2018	1.862
2019	1.619
2020	1.634
Trailing average debt risk premium	**2.316**

** Debt risk premium estimate for 20-day averaging period to 29 March 2019, as a placeholder.*

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 116, Table 47.

Debt raising and hedging costs

611. Debt raising costs and hedging costs are the administrative costs and other charges incurred by businesses when obtaining and hedging finance.

612. The ERA provided for the recovery of direct debt financing costs and considered that an allowance of 0.100 per cent for debt raising costs was appropriate.

613. The ERA also provided for the recovery of an annual swap allowance of 0.114 per cent to compensate for the cost of conducting hedging for exposure to movements in the risk free rate.

Return on equity approach

614. The return on equity is the return that investors require from a firm to compensate them for the risk they take by investing their capital.

615. There are no readily observable proxies for the expected return on equity. While estimates of the cost of debt can be obtained by observing debt instruments, financial markets do not provide a directly observable proxy for the cost of equity, for either individual firms or for the whole market.

616. Estimating a forward-looking return on equity that is sufficient to enable regulated firms to recoup their prevailing equity financing costs requires the use of models. Generally, these models seek to explain the required return on equity through a relationship with some portfolio of risk factors, or else in terms of the present value of the expected stream of future cash flows. The model most used by Australian regulators for quantifying the return on equity and associated risk has been the Sharpe Lintner Capital Asset Pricing Model (CAPM).

617. The ERA stated that it would determine a single point estimate for the return on equity using the Sharpe Lintner CAPM:

$$R_i = R_f + \beta_i \left(R_m - R_f \right)$$

where:

R_i is the required rate of return on equity for the asset, firm or industry in question

R_f is the risk free rate

β_i is the equity beta that describes how a particular portfolio i will follow the market which is defined as $\beta_i = \text{cov}\left(R_i, R_m\right) / \text{var}\left(R_m\right)$

$\left(R_m - R_f\right)$ is the market risk premium.

Risk free rate (equity)

618. The ERA stated that it would use observed yields from five-year Commonwealth Government Security bonds to estimate the risk free rate of return for the purpose of estimating the return on equity.

619. For the draft decision the ERA estimated a risk free rate for the cost of equity of 1.59 per cent for the 20-day averaging period to 29 March 2019.

Market risk premium

620. The market risk premium is the expected rate of return over and above the risk free rate that investors require to invest in a fully diversified portfolio.

621. The market risk premium compensates an investor for the systematic risk of investing in a fully diversified portfolio. Systematic risk is risk that cannot be diversified away by investors because it affects all firms in the market.[235] Therefore, the market risk premium represents an investor's required expected return, over and above the risk free rate of return, on a fully diversified portfolio of assets. This is a forward-looking concept.

622. Consistent with the 2018 gas rate of return guidelines, the ERA determined a market risk premium of 6 per cent.

[235] The foundation of the Sharpe Lintner CAPM is the proposition that adding an asset to a portfolio reduces risk via the diversification effect but not beyond the risks that the assets in a portfolio share in common, that is, their systematic risk. At the limit, when one has invested in all available assets in the market portfolio, there is only systematic risk left. An important assumption of the CAPM is that assets are priced as though it is only their systematic risk that is relevant to investors.

Equity beta

623. Equity beta is the 'slope' parameter β_i in the Sharpe Lintner CAPM. The slope parameter β_i correlates the return on the specific asset, in excess of the risk free rate of return, to the rise and fall of the return on the market portfolio.

624. The equity beta is a parameter that measures the systematic risk of a security or a portfolio in comparison to the market.

625. Consistent with the 2018 gas rate of return guidelines, the ERA determined an equity beta of 0.7.

Gearing

626. Gearing is the proportion of a business's assets assumed to be financed by debt and equity. Gearing is defined as the ratio of the value of debt to total capital (that is, including debt and equity) and so is generally expressed as follows:

$$Gearing = \frac{Debt}{Debt + Equity}$$

627. This ratio is used to weight the costs of debt and equity when the regulated WACC is determined. Under the NGR, the allowed rate of return for a regulatory year should be a weighted average of the return on equity for the access arrangement period in which that year occurs and the return on debt for that year.[236]

628. Consistent with the 2018 gas rate of return guidelines, the ERA determined a gearing of 55 per cent.

Inflation

629. Inflation is the rate of change in the general level of prices of goods and services. Forecast inflation can be used to translate the nominal post-tax WACC to a real post-tax WACC.

630. A nominal rate of return incorporates the real rate of return, compounded with a rate that reflects expectations of inflation. In line with the requirements of the NGR, the ERA used a nominal vanilla rate of return for its draft decision.[237]

631. The ERA stated that it would estimate the expected inflation rate using the Treasury bond implied inflation approach. This approach uses the Fisher equation[238] and the observed yields of:

- Five-year Commonwealth Government Securities, which reflect a market-based estimate of the nominal risk free rate.
- Five-year indexed Treasury bonds, which reflect a market-based estimate of a real risk free rate.

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236 National Gas Rule, rule 87(4).

237 National Gas Rules, rule 87(4).

238 The formal Fisher equation is: $1+i=(1+r)(1+\pi^e)$, where: *i* is the nominal interest rate, *r* is the real interest rate and π^e is the expected inflation rate.

632. The ERA further stated that is would estimate the expected inflation rate consistent with the estimate of the risk free rate by adopting an averaging period of 20 trading days. The approach uses linear interpolation to derive the daily point estimates of both the nominal five-year risk free rate and the real five-year risk free rate for use in the Fisher equation.[239] The term of the resulting average expected inflation rate is five years, consistent with the length of the access arrangement period.

633. For the draft decision the ERA estimated a forecast inflation of 1.28 per cent as at the 20-day averaging period to 29 March 2019.

Value of imputation credits (gamma)

634. The NGR require the ERA to set out its approach to estimating the value of imputation credits (gamma), a parameter in the post-tax revenue model.

635. The imputation tax system prevents corporate profits from being taxed twice. Prior to the introduction of imputation on 1 July 1987, company profits were taxed once at the corporate level and again at the dividend recipient level (for example, as personal income tax). Under the Australian imputation tax system, franking credits are distributed to investors at the time dividends are paid and provide an offset to those investors' taxation liabilities.

636. The gamma parameter accounts for the reduction in the effective corporate taxation that is generated by the distribution of franking credits to investors. Generally, investors who are able to use franking credits will accept a lower required rate of return, before personal tax, on an investment that has franking credits, compared with an investment that has similar risk and no franking credits.

637. The ERA determined gamma through the Monkhouse formula as the product of the distribution rate and utilisation rate. The distribution rate and utilisation rate are separately estimated.

638. The distribution rate represents the proportion of imputation credits generated by a benchmark efficient entity that is expected to be distributed to investors. The ERA considered that the distribution rate was a firm-specific, rather than a market-wide, parameter.

639. To estimate the distribution rate, the ERA relied on 0.9 for the distribution rate from financial reports of the 50 largest Australian Securities Exchange-listed firms.[240]

[239] It is not common to observe a Commonwealth Government Securities bond with an expiry date that exactly matches that of the regulatory period end. To overcome this, two bonds are selected that fall on either side of the end day of the regulatory period. The dates on these bonds are referred to as the 'straddle' dates. Linear interpolation estimates the yields on the regulatory period end date by assuming a linear increase in yields between the straddle dates on the two bonds observed.

[240] Lally M., October 2018, *Estimating the Distribution Rate for Imputation Credits for the Top 50 ASX Companies*, p. 4.

640. The ERA considered that the distribution rate was at least 0.9. As detailed by Dr Martin Lally, the three energy network businesses for which data is available produce a higher distribution rate of one. Addressing the problems of limited available data and ability for firm manipulation, the ERA considered the use of the 50 largest listed firms was the best proxy for the distribution rate for the benchmark efficient entity. Dr Lally also found that the distribution rate may be slightly higher with the removal of foreign operations.[241]

641. The utilisation rate is the weighted average of the utilisation rates of individual investors, with investors able to fully use the credits having a rate of one and those unable to use them having a rate of zero. The ERA considered that the utilisation rate was a market-wide, rather than a firm-specific, parameter.

642. To estimate the utilisation rate, the ERA relied on the equity ownership approach to determine the percentage of domestic investors in the Australian equity market. The utilisation rate is estimated for all Australian equity from the national accounts of the Australian Bureau of Statistics. The ERA considered that a utilisation rate of 0.60 was appropriate.

643. Consistent with the 2018 gas rate of return guidelines, the ERA determined a gamma of 0.5.

Weighted average cost of capital

644. Based on the 2018 gas rate of return guidelines and above assessments, the ERA determined the point estimates for each of the parameters (Table 67). The ERA considered the estimates to be consistent with the NGL, NGR and national gas objective.

- The ERA estimated the nominal after tax cost of equity as 5.79 per cent.
- The ERA estimated the nominal cost of debt as 4.39 per cent.
- The ERA's rate of return estimate was 5.02 per cent.

[241] Lally M., December 2018, *The Estimation of Gamma: Review of Recent Evidence*.

Table 67: ERA's draft decision rate of return estimate for AA4

Component	GGT proposed	Draft decision
Averaging period	*28 September 2018*	*29 March 2019*
Return on debt (%)		
5-year interest rate swap (effective yield)	2.31	1.86
Debt risk premium (10-year average)	2.315	2.316
Debt issuing cost (0.100%) + hedging (0.114%)	0.214	0.214
Nominal return on debt	***4.84***	***4.39***
Return on equity		
Nominal risk-free rate (%)	2.25	1.59
Market risk premium (%)	6.00	6.00
Equity beta	0.7	0.7
Nominal return on equity (%)	***6.45***	***5.79***
Other parameters		
Debt proportion (%)	55	55
Inflation rate (%)	1.87	1.28
Corporate tax rate (%)	30	30
Franking credit	0.5	0.5
Nominal after-tax WACC (%)	**5.56**	**5.02**
Real after-tax WACC (%)	3.63	3.69

Source: ERA, 31 July 2019, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, p. 121, Table 48.

645. The ERA used a 20-day averaging period to 29 March 2019 as a placeholder and noted that the final decision would be updated for GGT's final nominated averaging period.

646. It was further noted that, consistent with the rate of return guidelines, the return on debt would be updated annually, by updating the debt risk premium (which is estimated as a historical trailing average), and the reference tariff would be automatically updated.

647. The ERA required GGT to amend its rate of return to be 5.02 per cent.

> **Draft Decision Required Amendment 7**
>
> Subject to the nomination of a final averaging period, GGT must amend its rate of return estimate to be 5.02 per cent (vanilla nominal after-tax).

GGT's response to the draft decision

648. GGT accepted the ERA's draft decision required amendment 7 and used 5.02 per cent as the rate of return to determine the total revenue and reference tariff of its revised proposal.[242] GGT separately and confidentially nominated an averaging period for the purpose of the ERA's final decision.[243]

Final decision

649. On 11 September 2019, GGT proposed the averaging period for calculating the risk free rate and debt risk premium as part of the rate of return for AA4.[244]

650. The ERA has accepted GGT's nomination of the averaging periods for its market-based parameters of the rate of return, which have been applied in the final decision. For the final decision the averaging period for the market-based parameters is the 20 trading days to 15 October 2019.

651. The ERA has determined the rate of return estimate for this final decision consistent with the binding rate of return guidelines and the assessments that were undertaken for the draft decision, using the averaging period nominated by GGT (Table 68).

- The ERA estimates the nominal after tax cost of equity as 4.92 per cent.
- The ERA estimates the nominal cost of debt as 3.41 per cent.
- The ERA's rate of return estimate is 4.09 per cent.

[242] GGT, 11 September 2019, *Proposed Revised Access Arrangement Information Amended in response to ERA Draft Decision dated 31 July 2019*, p. 20.

[243] GGT, 11 September 2019, *Goldfields Gas Pipeline Access Arrangement revision: averaging periods for rate of return determination (confidential).*

[244] GGT, 11 September 2019, *Goldfields Gas Pipeline Access Arrangement revision: averaging periods for rate of return determination (confidential).*

Table 68: ERA's final decision rate of return estimate for AA4

Component	ERA final decision
Return on debt (%)	
5-year interest rate swap (effective yield)	0.87
Debt risk premium (10-year average)	2.325
Debt issuing cost (0.100%) + hedging (0.114%)	0.214
Nominal return on debt	***3.41***
Return on equity	
Nominal risk-free rate (%)	0.72
Market risk premium (%)	6.00
Equity beta	0.7
Nominal return on equity (%)	***4.92***
Other parameters	
Debt proportion (%)	55
Inflation rate (%)	1.14
Corporate tax rate (%)	30
Franking credit	0.5
Nominal after-tax WACC (%)	**4.09**
Real after-tax WACC (%)	2.92

Required Amendment 6

The return on the capital base must reflect the weighted average cost of capital parameters in Table 68 of this final decision.

Depreciation

652. Rule 88 of the NGR sets out the requirements of the depreciation schedule:

> **88 Depreciation schedule**
>
> (1) The depreciation schedule sets out the basis on which the pipeline assets constituting the capital base are to be depreciated for the purpose of determining a reference tariff.
>
> (2) The depreciation schedule may consist of a number of separate schedules, each relating to a particular asset or class of assets.

653. Rules 89 and 90 of the NGR specify the depreciation criteria and requirements for the calculation of depreciation for establishing the opening capital base for the subsequent access arrangement.

654. The depreciation criteria specified by rule 89 are as follows:

> **89 Depreciation criteria**
>
> (1) The depreciation schedule should be designed:
>
> (a) so that reference tariffs will vary, over time, in a way that promotes efficient growth in the market for reference services; and
>
> (b) so that each asset or group of assets is depreciated over the economic life of that asset or group of assets; and
>
> (c) so as to allow, as far as reasonably practicable, for adjustment reflecting changes in the expected economic life of a particular asset, or a particular group of assets; and
>
> (d) so that (subject to the rules about capital redundancy), an asset is depreciated only once (ie that 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 (adjusted, if the accounting method approved by the [ERA] permits, for inflation)); and
>
> (e) so as to allow for the service provider's reasonable needs for cash flow to meet financing, non-capital and other costs.
>
> (2) Compliance with subrule (1)(a) may involve deferral of a substantial proportion of the depreciation, particularly where:
>
> (a) the present market for pipeline services is relatively immature; and
>
> (b) the reference tariffs have been calculated on the assumption of significant market growth; and
>
> (c) the pipeline has been designed and constructed so as to accommodate future growth in demand.

655. Rule 90 of the NGR specifies that a full access arrangement must contain provisions governing the calculation of depreciation:

> **90 Calculation of depreciation for rolling forward capital base from one access arrangement period to the next**
>
> (1) A full access arrangement must contain provisions governing the calculation of depreciation for establishing the opening capital base for the next access arrangement period after the one to which the access arrangement currently relates.
>
> (2) The provisions must resolve whether depreciation of the capital base is to be based on forecast or actual capital expenditure.

GGT's initial proposal

656. GGT's initial proposal of forecast regulatory depreciation for AA4 was calculated using the current cost accounting approach, consistent with the ERA's final decision for the AA3 period.[245]

657. GGT's projected capital base for AA4 included total forecast depreciation of $28.29 million.[246] GGT's proposed forecast regulatory depreciation (by asset class) for AA4 is shown in Table 69.

[245] ERA, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 30 June 2016 (as amendment on 21 July 2019), pp. 334-390.

[246] Nominal Dollars.

Table 69 GGT's initial proposal forecast depreciation ($ million nominal)

	2020	2021	2022	2023	2024	Total
Pipeline and laterals	1.377	1.544	1.718	1.898	2.084	**8.619**
Main line valve and scraper stations	0.125	0.134	0.141	0.148	0.155	**0.702**
Compressor stations	2.471	2.713	2.828	2.959	2.065	**13.036**
Receipt and delivery points facilities	-0.285	0.128	0.134	0.139	0.107	**0.224**
SCADA, communications and electronic equipment	0.505	0.607	0.772	0.842	0.928	**3.655**
Cathodic protection	0.091	0.140	0.154	0.175	0.158	**0.717**
Maintenance bases and depots	0.114	0.127	0.136	0.175	0.158	**0.674**
Other depreciable assets	0.054	0.156	0.162	0.168	0.120	**0.660**
Forecast depreciation	**4.453**	**5.548**	**6.043**	**6.473**	**5.770**	**28.288**

Source: GGT, Goldfields Gas Pipeline Access Arrangement Revision Proposal Supporting Information, 21 December 2018, p. 55, Table 31.

658. Table 70 shows the asset lives that GGT used to calculate the initial proposal forecast depreciation for AA4. These asset lives remain unchanged from AA3.

Table 70: GGT's proposed asset classes and expected economic lives (years)

Asset class	Economic life
Pipeline and laterals	70
Main line valve and scraper stations	50
Compressor stations	30
Receipt and delivery points facilities	30
SCADA, communications and electronic equipment	10
Cathodic protection	15
Maintenance bases and depots	50
Other depreciable assets	10

Source: GGT, Goldfields Gas Pipeline Access Arrangement Revision Proposal Supporting Information, 21 December 2018, p. 38, Table 18.

Draft decision

659. There were no submissions to the ERA addressing GGT's calculation of forecast depreciation for AA4.

660. As indicated by GGT, the ERA required forecast regulatory depreciation for AA3 to be calculated using the current cost accounting approach. GGT used this same approach to calculate forecast regulatory depreciation for AA4.

661. The current cost accounting approach is consistent with the criteria under rule 89(1) of the NGR and complies with the NGL. The approach:

- Promotes efficient growth in the market for reference services by allowing for efficient use of the GGP.
- Encourages efficient production and investment decisions by the service provider, thereby contributing to efficient growth in the market for reference services.
- Avoids price shocks for consumers when major assets reach the end of their effective life and are replaced.
- Ensures outcomes that are in the long-term interest of consumers with respect to price by avoiding subsidies between current and future consumers.

662. GGT's proposed asset lives for asset classes used in the calculation of depreciation remain unchanged from AA3. The asset lives also correspond with those used and approved for other gas transmission pipelines within Australia.[247] The ERA considered that GGT's proposed asset lives met the requirements of rule 88 of the NGR and the criteria set by rule 89.

663. While GGT's method and asset lives used to calculate depreciation met the requirements of the NGR, the calculation of depreciation would change as a result of required amendments to other aspects of GGT's access arrangement proposal (for example, amendments to capital expenditure). Consistent with the required amendments in the draft decision, the ERA recalculated total forecast depreciation for AA4 as $55 million (Table 71).

[247] Energy Market Consulting Associates, *Review of Technical Aspects of the Proposed Access Arrangement*, July 2019, p. 23.

Table 71 ERA's draft decision forecast depreciation ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024	Total
Pipeline and laterals	7.140	7.143	7.143	7.143	7.143	**35.711**
Main line valve and scraper stations	0.186	0.218	0.218	0.218	0.218	**1.058**
Compressor stations	2.591	2.823	2.828	2.842	1.972	**13.056**
Receipt and delivery points facilities	(0.286)	0.155	0.175	0.178	0.145	**0.366**
SCADA, communications and electronic equipment	0.465	0.485	0.492	0.496	0.502	**2.440**
Cathodic protection	0.084	0.127	0.127	0.124	0.083	**0.545**
Maintenance bases and depots	0.217	0.260	0.263	0.263	0.263	**1.266**
Other depreciable assets	0.050	0.153	0.148	0.147	0.100	**0.599**
Forecast depreciation	**10.446**	**11.363**	**11.393**	**11.411**	**10.428**	**55.041**

Source: ERA, Draft Decision, Appendix 7, GGP Tariff Model, December 2019.

664. The amount of depreciation in 2024 for compressor stations and receipt and delivery points facilities reduced due to the initial capital base assets being fully depreciated. The cathodic protection and other depreciable assets depreciation also decrease due to the declining capital expenditure for those categories. The negative depreciation amount for receipt and delivery points facilities in 2020 was due to over-depreciation in prior years, which needed to be corrected.

665. The ERA did not model the asset base by category in nominal terms as GGT had done. In order to derive the nominal regulatory depreciation used for total revenue, the amount by which the asset base had been escalated (that is, by inflation) was removed from the calculated nominal depreciation to avoid double-counting inflation. The double-counting of inflation occurs when a nominal rate of return is applied to a nominal asset base. This double-counting must be removed from depreciation. The higher the inflation rate, the higher the inflationary gain and therefore the adjusted regulatory depreciation is lower. The ERA's forecast of nominal regulatory depreciation for AA4 was $34.544 million. This value was higher than GGT's nominal depreciation ($28.288 million) because the ERA's inflation forecast of 1.28 per cent was lower than GGT's inflation forecast of 1.87 per cent.

666. The ERA required GGT to amend the forecast of depreciation for AA4.

> **Draft Decision Required Amendment 8**
>
> GGT must amend the forecast of depreciation for the fourth access arrangement period to reflect the values set out in Table 51 of [the] draft decision. [Table 71 of this final decision]

GGT's response to the draft decision

667. GGT revised the forecast of depreciation for AA4. Table 72 shows GGT's revised forecast of deprecation by asset class. The forecast was determined using an indexed straight line depreciation method.

Table 72 GGT's revised forecast depreciation ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024	Total
Pipeline and laterals	7.256	7.259	7.259	7.259	7.259	**36.291**
Main line valve and scraper stations	0.190	0.222	0.222	0.222	0.222	**1.077**
Compressor stations	2.687	2.918	2.923	2.937	2.039	**13.505**
Receipt and delivery points facilities	-0.294	0.158	0.178	0.180	0.147	**0.369**
SCADA, communications and electronic equipment	0.482	0.503	0.512	0.514	0.517	**2.527**
Cathodic protection	0.086	0.130	0.129	0.126	0.084	**0.555**
Maintenance bases and depots	0.220	0.262	0.265	0.265	0.265	**1.278**
Other depreciable assets	0.030	0.151	0.151	0.151	0.102	**0.584**
Forecast depreciation	**10.657**	**11.602**	**11.638**	**11.655**	**10.636**	**56.187**

Source: GGT, Access Arrangement Revision Proposal Response to ERA Draft Decision, 11 September 2019, Table 6, p. 9.

668. GGT's revised forecast of depreciation differed from the forecast required by the ERA in the draft decision. GGT submitted that the reasons for the difference were the same reasons set out in GGT's response to draft decision required amendment 4 (see paragraph 434 of this decision).[248]

Final decision

669. GGT revised its forecast of deprecation for AA4 consistent with the other amendments made to its proposal, such as amendments made to its proposed capital expenditure and opening capital base.

670. The final decision capital expenditure forecast includes equity raising costs, as outlined at paragraphs 560 to 563. The forecast depreciation on these equity raising costs for AA4 is calculated based on an asset life of 33 years for the equity raising capital expenditure. The 33-year asset life is derived as the weighted average asset life of the other assets in GGT's capital base.

671. While GGT's method and asset lives used to calculate depreciation were consistent with the ERA's draft decision, and met the requirements of the NGR, the calculation of depreciation will change as a result of required amendments to other aspects of GGT's access arrangement proposal. Consistent with the required amendments in

[248] GGT, *Access Arrangement Revision Proposal Response to ERA Draft Decision*, 11 September 2019, p. 8.

this final decision, the ERA has recalculated total forecast depreciation for AA4 as $56.687 million (Table 73).

Table 73 ERA's final decision forecast depreciation ($ million real as at 31 December 2018)

	2020	2021	2022	2023	2024	Total
Pipeline and laterals	7.327	7.330	7.330	7.330	7.330	**36.648**
Main line valve and scraper stations	0.192	0.224	0.224	0.224	0.224	**1.087**
Compressor stations	2.713	2.947	2.952	2.967	2.060	**13.639**
Receipt and delivery points facilities	(0.285)	0.159	0.179	0.182	0.148	**0.384**
SCADA, communications and electronic equipment	0.474	0.496	0.505	0.508	0.513	**2.496**
Cathodic protection	0.087	0.131	0.130	0.128	0.085	**0.560**
Maintenance bases and depots	0.223	0.266	0.269	0.269	0.269	**1.295**
Other depreciable assets	0.025	0.150	0.150	0.150	0.101	**0.576**
Equity raising cost	0.000	0.001	0.001	0.001	0.001	**0.002**
Forecast depreciation	**10.755**	**11.702**	**11.740**	**11.758**	**10.731**	**56.688**

Source: ERA, Final Decision, Appendix 7, GGP Tariff Model, December 2019.

Required Amendment 7

Depreciation must reflect the values in Table 73 of this final decision.

Taxation

672. Rule 76(c) of the NGR establishes the estimated cost of corporate income tax as a separate building block for the determination of total revenue.

673. Rule 87A of the NGR sets out the formula for calculating the estimated cost of corporate income tax.

> **87A Estimated cost of corporate income tax**
>
> (1) The estimated cost of corporate income tax of a service provider for each regulatory year of an access arrangement period (ETC_t) 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 [ERA]; and

γ is the allowed imputation credits for the regulatory year.

GGT's initial proposal

674. GGT used the formula in rule 87A to calculate the estimated cost of corporate income tax for each regulatory year in AA4.

675. GGT applied a value for the expected statutory income tax rate of 30 per cent, equal to the current statutory corporate income tax rate.[249]

676. GGT applied a value for allowed imputation credits of 0.5, as required under the binding rate of return guidelines.[250] [251]

677. GGT calculated the estimated taxable income for each regulatory year in AA4 as the revenue that "would be earned by a benchmark efficient service provider which uses the Covered Pipeline to provide reference services" (that is, smoothed tariff revenue) less deductions for allowable taxation expenses that would be incurred by such an entity in the provision of those services.[252]

678. GGT listed the proposed deductions for allowable taxation expenses as:

(a) cost of debt financing – the return on debt from the total revenue calculation;

(b) operating expenses – the forecasts of operating expenditure from the total revenue calculation; and

(c) tax depreciation – depreciation on the historical cost of the assets comprising the GGP, which may be depreciated for tax purposes (the tax asset base) calculated using the straight line method with the asset lives determined for taxation purposes by the Australian Taxation Office.[253]

679. GGT's calculation of the estimated cost of corporate income tax for each regulatory year in AA4 is set out in Table 74.

[249] GGT, Goldfields Gas Pipeline Access Arrangement Revision Proposal Supporting Information, 1 January 2019, p. 91.

[250] GGT, Goldfields Gas Pipeline Access Arrangement Revision Proposal Supporting Information, 1 January 2019, p. 92.

[251] Economic Regulation Authority, *Rate of Return Guidelines (2018) Meeting the requirements of the National Gas Rules*, 18 December 2018, pp. 39–40.

[252] GGT, Goldfields Gas Pipeline Access Arrangement Revision Proposal Supporting Information, 1 January 2019, p. 91.

[253] GGT, Goldfields Gas Pipeline Access Arrangement Revision Proposal Supporting Information, 1 January 2019, p. 91.

Table 74: GGT's initial proposed calculation of estimated corporate income tax ($million nominal)

	2020	2021	2022	2023	2024
Forecast revenue from reference service	**49.880**	**49.744**	**49.744**	**49.744**	**49.880**
Tax expenses:					
- Return on debt	(10.131)	(10.209)	(10.130)	(10.027)	(9.904)
- Tax depreciation	(2.605)	(2.663)	(2.449)	(2.522)	(2.113)
- Operating expenditure	(19.606)	(20.028)	(20.619)	(21.219)	(21.852)
	(32.342)	**(32,899)**	**(33.198)**	**(33.767)**	**(33.869)**
Net income	17.538	16.845	16.546	15.977	16.012
Tax loss carried forward	0.000	0.000	0.000	0.000	0.000
Taxable income	**17.538**	**16.845**	**16.546**	**15.977**	**16.012**
Estimated cost of tax (tax rate=30 per cent)	**5.261**	**5.053**	**4.964**	**4.793**	**4.803**
Value of imputation credits (γ=0.5)	**2.631**	**2.527**	**2.482**	**2.396**	**2.402**

Source: GGT, Goldfields Gas Pipeline Access Arrangement Revision Proposal Supporting Information, 1 January 2019, p. 91, Table 44.

Tax asset lives

680. The tax asset lives for asset classes proposed by GGT for the purpose of calculating the forecast tax asset base in AA4 are set out in Table 75.

Table 75: GGT's initial proposed tax asset lives

Asset categories	GGT AA4 proposed asset lives
Pipeline and laterals	20
Main line valve and scraper stations	20
Compressor stations	20
Receipt and delivery point facilities	20
SCADA, communications and electronic equipment	10
Cathodic protection	10
Maintenance bases and depots	20
Other depreciable assets	10

Source: Goldfields Gas Transmission Pty Ltd, GGP Confidential AA Tariff Model 2020-2024, 1 January 2020.

Tax asset base

681. GGT used the roll forward method to establish the opening value of the forecast tax asset base for each regulatory year in AA4.

682. The opening tax asset base for the first regulatory year in AA4 (2020) was calculated by rolling forward the closing value of the tax asset base for AA3, adjusted for updates to the amount of capital expenditure and tax depreciation that the ERA approved in its final decision for AA3.

683. The tax asset base proposed by GGT for AA3 is set out in Table 76.

Table 76: GGT's initial proposed tax asset base for AA3 ($ million nominal)

	2015	2016	2017	2018	2019
Opening tax asset base	63.020	41.408	22.621	19.964	18.039
Capital expenditure	3.334	1.409	1.432	1.025	1.761
Tax depreciation	**(24.946)**	**(20.196)**	**(4.089)**	**(2.950)**	**(2.808)**
Asset disposals	0.00	0.00	0.00	0.00	0.00
Closing value	41.408	22.621	19.964	18.039	16.992

Source: Goldfields Gas Transmission Pty Ltd, GGP Confidential AA Tariff Model 2020-2024, 1 January 2020.

684. The opening tax asset base for the remaining regulatory years in AA4 (2021 to 2024) was calculated by rolling forward the closing value of the tax asset base in the previous regulatory year, adjusted for forecast capital expenditure and tax depreciation proposed by GGT during AA4.

685. The forecast tax asset base proposed by GGT for each regulatory year in AA4 is set out in Table 77.

Table 77: GGT's proposed forecast tax asset base for AA4 ($ million nominal)

	2020	2021	2022	2023	2024
Opening tax asset base	16.992	21.776	21.671	21.409	20.744
Capital expenditure	7.389	2.558	2.187	1.857	3.162
Tax depreciation	**(2.605)**	**(2.663)**	**(2.449)**	**(2.522)**	**(2.113)**
Asset disposals	0.00	0.00	0.00	0.00	0.00
Closing value	21.776	21.671	21.409	20.744	21.793

Source: Goldfields Gas Transmission Pty Ltd, GGP Confidential AA Tariff Model 2020-2024, 1 January 2020.

Tax depreciation method

686. GGT used the straight line method to depreciate:

- Existing capital assets purchased prior to 1 January 2020, as identified in the tax asset base proposed for AA3.
- New capital assets purchased after 1 January 2020, as identified in the forecast tax asset base proposed for AA4.[254]

[254] GGT, Goldfields Gas Pipeline Access Arrangement Revision Proposal Supporting Information, 1 January 2019, p. 91.

Draft decision

687. The ERA assessed GGT's calculation of the estimated cost of corporate income tax for each regulatory year in AA4 against the requirements of rule 87A of the NGR.

688. The ERA accepted GGT's value for the expected statutory income tax of 30 per cent, which was consistent with expectations for the statutory company tax rate over the AA4 period.[255]

689. The ERA accepted GGT's value for allowed imputation credits of 0.5, as required under the binding rate of return guidelines.[256] [257]

690. To evaluate GGT's calculation of estimated taxable income, the ERA focussed on the requirement that this must reflect the taxable income in each regulatory year that would be earned by a benchmark efficient entity, if such an entity delivered services by means of the covered transmission pipeline.

691. The ERA calculated estimated taxable income using the following methodology:

Smoothed tariff revenue:

minus approved forecast operating expenditure

minus depreciation of the tax asset base, calculated using the straight line method for assets purchased before 1 January 2020 and the diminishing value method for assets purchased on or after 1 January 2020

minus debt servicing costs

add tax losses carried forward

equals estimated taxable income.[258]

692. The ERA's draft decision calculation of the estimated cost of corporate income tax for each regulatory year in AA4 is set out in Table 78.[259]

[255] Economic Regulation Authority, *Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, 31 July 2019, p. 126.

[256] Economic Regulation Authority, *Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, 31 July 2019, p. 126.

[257] Economic Regulation Authority, *Rate of Return Guidelines (2018) Meeting the requirements of the National Gas Rules*, 18 December 2018, pp. 39–40.

[258] Economic Regulation Authority, *Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, 31 July 2019, p. 133.

[259] These values will be re-calculated in each year of AA4 as part of the tariff variation process that also includes changes to update the debt risk premium.

Table 78: ERA's draft decision estimated cost of corporate income tax in AA4 ($ million nominal)

	2020	2021	2022	2023	2024
Estimated taxable income	15.488	16.397	16.515	17.020	17.324
Tax payable	4.646	4.919	4.955	5.106	5.197
Value of imputation credits	(2.323)	(2.459)	(2.477)	(2.553)	(2.599)
Estimated corporate income tax	**2.323**	**2.459**	**2.477**	**2.553**	**2.599**

Source: Economic Regulation Authority, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, 31 July 2019, p.134.

Tax asset lives

693. The ERA accepted the tax asset lives proposed by GGT for the asset classes listed in Table 75.

694. The ERA confirmed that the tax asset lives for the asset classes proposed by GGT were consistent either with relevant sections in the *Income Tax Assessment Act 1997* or the Commissioner of Taxation's Ruling for the gas supply industry (TR2019/5).

695. The ERA also confirmed that GGT had used the 20-year statutory cap that applied to some asset classes, as identified in TR2019/5.[260]

696. The ERA considered that the application of the 20-year statutory cap on asset classes, as identified in the Commissioner of Taxation's Rulings for the gas supply industry, would be an efficient regulatory benchmark. That is, in taking this approach, an entity would increase the net present value of depreciation deductions calculated for taxation purposes and, therefore, minimise the net present value of its corporate tax expense and maximise the net present value of its investment.

Tax depreciation method

697. The ERA required that GGT amend its tax depreciation method to use the diminishing value method, instead of the straight-line method, as the efficient regulatory benchmark to depreciate new assets purchased on or after 1 January 2020.[261]

698. The ERA examined the reports and submissions published by the AER through its 2018 Review of the Regulatory Tax Approach, including the expert opinions of the AER's consultants Dr Martin Lally and PricewaterhouseCoopers. [262] [263] [264]

699. For reasons set out in detail at paragraphs 576 to 588 of the draft decision, the ERA concluded that the benchmark efficient entity would use the diminishing value method

260 Australian Taxation Office, *Income tax: effective life of depreciating assets*, Taxation Ruling (TR 2019/5), 1 July 2019.

261 Economic Regulation Authority, *Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, 31 July 2019, p. 130.

262 Australian Energy Regulator, *Review of regulatory tax approach*, including stakeholder submission to Issues Paper (May 2018), Initial Report (June 2018), Discussion Paper (November 2018), and Final Report (December 2018),

263 Lally, M., *Tax Payments versus the AER's Allowances,* 16 June 2018.

264 PricewaterhouseCoopers, *AER Tax Review 2018 Expert Advice*, 26 October 2018.

to depreciate new assets purchased from 1 January 2020, except for maintenance bases and depots.

700. The ERA considered that the use of the diminishing value method as an efficient regulatory benchmark to depreciate new assets purchased from 1 January 2020 (excluding maintenance bases and depots) would be consistent with recommendations in the AER's final report for its 2018 Review of the Regulatory Tax Approach.[265]

701. However, the ERA noted that use of the straight-line method to calculate tax depreciation for existing assets purchased prior to 1 January 2020 would be consistent with its final decision for AA3.

702. Given that the benchmark efficient entity would not be able to change the tax depreciation method for existing assets retrospectively under Section 40.130 of the *Income Tax Assessment Act 1997*, the ERA considered that it was appropriate for GGT to continue to use the straight-line method to calculate tax depreciation for existing assets purchased prior to 1 January 2020.

703. For maintenance bases and depots, the ERA considered that an efficient entity would use the straight-line method, as required under Division 43 of the *Income Tax Assessment Act 1997*.[266]

Immediate expensing of refurbishment capital expenditure

704. The ERA indicated that it was considering an alternative taxation treatment for refurbishment capital expenditure and requested that GGT provide additional information on the amount of capital expenditure that would be regarded as refurbishment capital expenditure in AA4.

705. Specifically, the ERA considered that, if refurbishment capital expenditure was a material part of capital expenditure, it should be immediately expensed in the calculation of the estimated cost of corporate income tax.

706. A key finding for the AER in its 2018 Review of the Regulatory Tax Approach was that it may be possible for an entity to include refurbishment capital expenditure in its calculation of the tax asset base for regulatory purposes while immediately expensing this expenditure in actual tax returns. [267]

707. Further, the AER had proposed to adopt immediate expensing of refurbishment capital expenditure in its regulatory models, and considered that this approach would be in the long-term interests of consumers.[268]

Tax asset base

708. The ERA used the roll forward method to establish the opening value of the forecast tax asset base for AA4.

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265 Australian Energy Regulator, *Final Report: Review of regulatory tax approach (Final Report)*, 17 December 2018, p. 20.

266 Economic Regulation Authority, *Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, 31 July 2019, p. 131.

267 Economic Regulation Authority, *Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, 31 July 2019, p. 131.

268 Australian Energy Regulator, *Final Report: Review of regulatory tax approach (Final Report)*, 17 December 2018, p. 64.

709. The opening tax asset base for the first regulatory year in AA4 (2020) was calculated by rolling forward the closing value of the tax asset base for AA3, adjusted for updates to capital expenditure and tax depreciation approved by the ERA for each regulatory year in AA3.

710. The ERA calculated the roll-forward tax asset base for AA3 using the method that was determined in the final decision for AA3.

711. Specifically:

Opening value at 1 January 2015

plus actual capital expenditure (net of capital contributions) incurred in AA3 (including updates to reflect Draft Decision Required Amendment 4)

less depreciation based on actual capital expenditure incurred in (using the straight line method)

less any asset disposals during AA3.

712. The tax asset base calculated by the ERA for each regulatory year in AA3 is set out in Table 79.

Table 79: ERA's draft decision actual tax asset base for AA3 ($ million nominal)

	2015	2016	2017	2018	2019
Opening tax asset base	63.020	41.329	22.550	19.901	17.789
Capital expenditure	3.255	1.409	1.432	0.831	1.657
Tax depreciation	**(24.946)**	**(20.188)**	**(4.082)***	**(2.943)**	**(2.791)**
Asset disposals	0.000	0.000	0.000	0.000	0.000
Closing value	41.329	22.550	19.901	17.789	16.656

Source: Economic Regulation Authority, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, 31 July 2019, p.132.

*Note: * The decline in tax depreciation in 2017 is because the effective tax lives of some assets expired at the end of 2016 and so are no longer included in the tax asset base.*

713. The ERA calculated the closing value for the forecast tax asset base for each regulatory year in AA4 using the following method:

Opening value (equal to the closing value for the previous regulatory year)

plus forecast expenditure (net of capital contributions) incurred in the regulatory year (including revisions to reflect Draft Decision Required Amendment 5)

less depreciation based on forecast capital expenditure incurred in AA3 (using the diminishing value method)

less forecast asset disposals during AA4.

714. The forecast tax asset base calculated by the ERA in its draft decision for each regulatory year in AA4 is set out in Table 80.

Table 80: ERA's draft decision forecast tax asset base for AA4 ($ million nominal)

	2020	2021	2022	2023	2024
Opening tax asset base	16.656	17.426	15.839	14.233	12.444
Capital expenditure	3.353	1.079	0.715	0.506	0.898
Tax depreciation	**(2.582)**	**(2.666)**	**(2.321)**	**(2.295)**	**(1.772)**
Asset disposals	0.000	0.000	0.000	0.000	0.000
Closing value	17.426	15.839	14.233	12.444	11.570

Source: Economic Regulation Authority, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, 31 July 2019, p.132.

Accrued tax losses

715. In its final decision for AA3, the ERA calculated a negative value for estimated taxable income in each of the final three years in AA4. Accordingly, the ERA calculated that GGT had accrued tax losses of $1.134 million over the AA3 period.[269]

716. Under Section 36.17 of the *Income Tax Assessment Act 1997*, a tax loss incurred by a corporate entity in any given financial year can be deducted against taxable income earned in any future financial year, or carried forward indefinitely, at the discretion of the entity. To calculate GGT's estimated cost of corporate income tax, the ERA considered that an efficient entity would immediately deduct a tax loss incurred in any given regulatory year against estimated taxable income in the following regulatory year.

717. The estimated taxable income (net of tax losses) calculated by the ERA for each regulatory year in its final decision for AA3 is set out in Table 81.

Table 81: ERA's final decision estimated taxable income for AA3 ($ million nominal)

	2015	2016	2017	2018	2019
Estimated taxable income	17.951	4.242	(2.201)	0.628	0.439
Carried forward tax loss	0.000	0.000	0.000	(2.201)	(1.573)
Estimated taxable income (Net of tax losses)	**17.951**	**4.242**	**(2.201)**	**(1.573)**	**(1.134)**

Source: Economic Regulation Authority, AA3 Amended Final Decision Tariff Model, July 2016

718. In the draft decision, the ERA recalculated estimated taxable income for each regulatory year in AA4 to update for any changes in the debt risk premium and actual operating expenditure over the period. Following variations to reference tariffs effective from 1 January 2019, the ERA determined that an accrued tax loss of $1.132 million (nominal) should be deducted against net taxable income calculated for the first regulatory year of AA4.

[269] Economic Regulation Authority, *Amended Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 21 July 2016, Table 104, p. 402.

719. The estimated taxable income (net of tax losses) calculated by the ERA in its draft decision for each regulatory year in AA4 is set out in Table 82.

Table 82: ERA's draft decision estimated taxable income for AA4 ($ million nominal)

	2020	2021	2022	2023	2024
Estimated taxable income	16.619	16.397	16.515	17.020	17.324
Carried forward tax loss	(1.132)	(0.000)	(0.000)	(0.000)	(0.000)
Estimated taxable income (Net of tax losses)	**15.488**	**16.397**	**16.515**	**17.020**	**17.324**

Source: Economic Regulation Authority, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, 31 July 2019, p. 134.

Estimated cost of corporate income tax

720. The ERA's draft decision calculation of the estimated cost of corporate income tax (net of imputation credits) for each regulatory year in AA4 is set out in Table 83.[270]

[270] The calculations would be revised annually as part of the tariff variation process that includes an update to the debt risk premium.

Table 83: ERA's draft decision estimated cost of corporate income tax net of imputation credits for AA4 ($ million nominal)

	2020	2021	2022	2023	2024
Revenue					
Tariff revenue (smoothed)	**45.207***	**45.084**	**45.084**	**45.084**	**45.207***
Expenses					
Operating expenditure	(17.243)	(17.433)	(17.910)	(17.691)	(18.298)
Debt servicing costs	(8.763)	(8.588)	(8.338)	(8.078)	(7.813)
Tax depreciation	(2.582)	(2.666)	(2.321)	(2.295)	(1.772)
Total expenses	**(28.588)**	**(28.687)**	**(28.569)**	**(28.064)**	**(27.883)**
Tax					
Net income	16.619	16.397	16.515	17.020	17.324
Tax losses carried forward	(1.132)	0.000	0.000	0.000	0.000
Taxable income	**15.488**	**16.397**	**16.515**	**17.020**	**17.324**
Income tax expense	4.646	4.919	4.955	5.106	5.197
Value of imputation credits	(2.323)	(2.459)	(2.477)	(2.553)	(2.599)
ERA-estimated cost of corporate income tax net of imputation credits	**2.323**	**2.459**	**2.477**	**2.553**	**2.599**

Source: Economic Regulation Authority, Draft Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, 31 July 2019, p. 134.

*Notes: * The forecast revenue from reference service in 2020 and 2024 is higher than the other years in AA4 because 2020 and 2024 are leap years.*

721. The ERA required that GGT amend its calculation of income tax and tax depreciation methods in accordance with Draft Decision Required Amendment 9.

> **Draft Decision Required Amendment 9**
>
> GGT must amend its calculation of income tax and tax depreciation methods as follows:
>
> - Amend the depreciation method to the diminishing value method for new assets from 1 January 2020.
> - Amend the estimated cost of corporate income tax in accordance with Table 58 of [the] draft decision. [Table 83 of this final decision]

GGT's response to the draft decision

722. GGT amended the method used to calculate depreciation for tax purposes by applying the diminishing value method, as the efficient regulatory benchmark, to depreciate new capital assets purchased on or after 1 January 2020.[271]

723. GGT did not amend its calculations of the estimated cost of corporate income tax for each regulatory year in accordance with Table 58 of the draft decision (Table 83 of this final decision).

724. For reasons outlined in previous chapters of this final decision, GGT did not accept the ERA's calculations of:

- Forecast operating expenditure undertaken for each regulatory year in AA4.
- Capital expenditure undertaken in AA3, used to calculate the opening value of the tax asset base for AA4 (2020).
- Forecast capital expenditure for AA4, used to calculate the opening value of the tax asset base for the remaining regulatory years in AA4 (2021 to 2024).
- Debt servicing costs in AA4.

725. GGT's calculation of the estimated cost of corporate income tax for each regulatory year in AA5 is set out in Table 84.

[271] GGT, *Goldfields Gas Pipeline Revised Access Arrangement 1 January 2020 Amended in response to ERA Draft Decision dated 31 July 2019*, 11 September 2019, p. 9.

Table 84: GGT's revised proposed cost of corporate income tax net of imputation credits for AA4 ($ million nominal)

	2020	2021	2022	2023	2024
Revenue*	**47.158**	**47.029**	**47.029**	**47.029**	**47.158**
Expenses					
Operating expenditure	(18.685)	(18.897)	(19.399)	(19.197)	(19.833)
Debt servicing costs	(9.025)	(8.957)	(8.805)	(8.638)	(8.460)
Tax depreciation	(2.628)	(2.717)	(2.335)	(2.275)	(1.721)
	(30.338)	**(30.571)**	**(30.539)**	**(30.110)**	**(30.013)**
Tax					
Net income	16.820	16.458	16.490	16.919	17.144
Tax loss brought forward	1.132	0.000	0.000	0.000	0.000
Taxable income	**15.689**	**16.458**	**16.490**	**16.919**	**17.144**
Income tax expense	4.707	4.938	4.947	5.076	5.143
Value of imputation credits (γ=0.5)	(2.353)	(2.469)	(2.473)	(2.538)	(2.572)
Cost of tax net of imputation credits	**2.353**	**2.469**	**2.473**	**2.538**	**2.572**

Source: GGT, Goldfields Gas Pipeline Revised Access Arrangement 1 January 2020 Amended in response to ERA Draft Decision dated 31 July 2019, 11 September 2019, p. 10.

Immediate expensing of refurbishment capital expenditure

726. In response to an information request by the ERA, GGT indicated that all refurbishment capital expenditure proposed in AA4 was included as major expenditure jobs in forecasts of operating expenditure and, therefore, immediately expensed.[272]

727. This approach is consistent with the position in the ERA's draft decision that, if material, refurbishment capital expenditure would be immediately expensed in the calculation of the estimated cost of corporate income tax.

728. As examples of major expenditure jobs submitted with forecast of operating expenditure over the AA4 period, GGT cited:

- main line valve (MLV) and scraper station above ground coating refurbishment
- MLV and scraper station bolted flange integrity program (stud bolt replacement)
- compressor station above ground coating refurbishment
- compressor station bolted flange integrity program (stud bolt replacement).[273]

[272] As provided by GGT on 2 December in response to ERA information request.

[273] As provided by GGT on 2 December in response to ERA information request.

Tax asset base

729. GGT did not revise its calculation of the tax asset base for AA3 or the forecast tax asset base for AA4 in accordance with the ERA's draft decision.

730. As noted, and for reasons outlined in previous chapters of this final decision, GGT did not use the ERA's calculations for:

- Actual capital expenditure undertaken in AA3, used to calculate the opening value of the tax asset base in AA4 (2020).
- Forecast capital expenditure for AA4, used to calculate the opening value of the tax asset base for the remaining regulatory years in AA4 (2021 to 2024).

731. The tax asset base calculated by GGT for each regulatory year in AA3 is set out in Table 85.

Table 85: GGT's revised proposed tax asset base for AA3 ($ million nominal)

	2015	2016	2017	2018	2019
Opening tax asset base	63.020	41.321	22.542	19.892	17.717
Capital expenditure	3.247	1.409	1.431	0.767	1.658
Tax depreciation	**24.946**	**20.188**	**4.082**	**2.942**	**2.787**
Asset disposals	0.000	0.000	0.000	0.000	0.000
Closing value	41.321	22.542	19.892	17.717	16.588

Source: GGT, analysis of Goldfields Gas Transmission Pty Ltd, GGP AA4 Amended Tariff Model 2020-2024, 2 October 2020, as provided on 26 November 2019 in response to ERA information request.

732. The forecast tax asset base and associated depreciation calculated by GGT for each regulatory year in AA4 is set out in Table 86.

Table 86: GGT's revised proposed forecast tax asset base for AA4 ($ million nominal)

	2020	2021	2022	2023	2024
Opening tax asset base	16.588	17.312	15.674	14.054	12.285
Capital expenditure	3.352	1.079	0.714	0.506	0.899
Tax depreciation	2.628	2.717	2.335	2.275	1.721
Asset disposals	0.000	0.000	0.000	0.000	0.000
Closing value	**17.312**	**15.674**	**14.054**	**12.285**	**11.463**

Source: GGT, analysis of Goldfields Gas Transmission Pty Ltd, GGP AA4 Amended Tariff Model 2020-2024, 2 October 2020, as provided on 28 November 2019 in response to ERA information request.

Carry forward tax losses

733. GGT carried forward tax losses accrued in AA3 by deducting $1.132 million (nominal) from estimated taxable income calculated for the first regulatory year of AA4 (2020).[274]

Final decision

734. The ERA has assessed GGT's amended proposal for the estimated cost of corporate income tax for each regulatory year in AA4 against the requirements in rule 87A of the NGR.

735. The ERA accepts the values that GGT has used for:

- The expected statutory income tax rate for each regulatory year in AA4 of 30 per cent, which is consistent with expectations for the statutory company tax rate for the AA4 period.
- Allowed imputation credits of 0.50, which conforms with the binding rate of return guidelines.[275]

736. The ERA has revised the method that was used to calculate estimated taxable income in its draft decision. Consistent with rules 76 and 92 of the NGR, the ERA considers that the calculation of estimated taxable income should be correctly based on total revenue (unsmoothed) rather than tariff revenue (smoothed). This is because:

- Under Rule 76(c) of the NGR, the estimated cost of corporate income tax is established as a separate building block for the determination of total (unsmoothed) revenue.
- Under Rule 92(2) of the NGR, the tariff variation mechanism used to determine the reference tariff profile over the course of an access arrangement, must be designed to equalise the net present value of forecast revenue from reference services for the access arrangement period with the portion of total revenue (unsmoothed) allocated to reference services for the access arrangement period.

737. The method used to calculate estimated taxable income in this final decision is:

Unsmoothed tariff revenue	
minus	approved forecast operating expenditure
minus	depreciation of the tax asset base, calculated using the straight-line method for assets purchased before 1 January 2020 and the diminishing value method for assets purchased on or after 1 January 2020
minus	debt servicing costs
equals	estimated taxable income

738. For reasons outlined in previous chapters of this final decision, the ERA requires that GGT amend:

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274 GGT, *Goldfields Gas Pipeline Revised Access Arrangement 1 January 2020 Amended in response to ERA Draft Decision dated 31 July 2019*, 11 September 2019, p. 9.

275 Economic Regulation Authority, *Rate of Return Guidelines (2018) Meeting the requirements of the National Gas Rules*, 18 December 2018, pp. 39–40.

- Forecasts for operating expenditure to be undertaken for each regulatory year in AA4.
- Capital expenditure undertaken in AA3, used to calculate the opening value of the tax asset base in AA4 (2020).
- Forecast capital expenditure for AA4, used to calculate the opening value of the tax asset base for the remaining regulatory years in AA4 (2021 to 2024).

739. The ERA's estimated cost of corporate income tax (net of imputation credits) for each regulatory year in AA4 is set out in Table 87.

Table 87: ERA's final decision estimated cost of corporate income tax for AA4 ($ million nominal)

	2020	2021	2022	2023	2024
Estimated taxable income	14.770	16.014	16.633	16.840	16.308
Tax payable	4.431	4.804	4.990	5.052	4.892
Value of imputation credits	(2.216)	(2.402)	(2.495)	(2.526)	(2.446)
Estimated corporate income tax	**2.216**	**2.402**	**2.495**	**2.526**	**2.446**

Immediate expensing of refurbishment capital expenditure

740. The ERA has reviewed GGT's revised forecasts for operating and capital expenditure in each regulatory year of AA4. Based on all available information, the ERA confirms that all refurbishment capital expenditure has been included in forecasts of operating expenditure and, hence, immediately expensed.

Tax asset base

741. The ERA does not accept GGT's revisions of the actual tax asset base for AA3 or the forecast tax asset base for AA4.

742. As noted, and for reasons outlined in previous chapters of this final decision, the ERA does not accept GGT's revised calculations for:

- Capital expenditure undertaken in AA3, used to calculate the opening value of the tax asset base in AA4 (2020).
- Forecast capital expenditure for AA4, used to calculate the opening value of the tax asset base for the remaining regulatory years in AA4 (2021 to 2024).

743. The tax asset base calculated by the ERA for each regulatory year in AA3 is set out in Table 88.

Table 88: ERA's final decision actual tax asset base for AA3 ($ million nominal)

	2015	2016	2017	2018	2019
Opening tax asset base	63.020	41.329	22.550	19.900	17.724
Capital expenditure	3.255	1.409	1.432	0.766	1.640
Tax depreciation	**(24.946)**	**(20.188)**	**(4.081)**	**(2.943)**	**(2.787)**
Asset disposals	0	0	0	0	0
Closing value	41.329	22.550	19.900	17.724	16.577

744. The forecast tax asset base calculated by the ERA for each regulatory year in AA4 is set out in Table 89.

Table 89: ERA's final decision forecast tax asset base for AA4 ($ million nominal)

	2020	2021	2022	2023	2024
Opening tax asset base	16.577	17.363	15.770	14.161	12.372
Capital expenditure	3.364	1.075	0.711	0.503	0.891
Tax depreciation	**(2.578)**	**(2.668)**	**(2.320)**	**(2.292)**	**(1.768)**
Asset disposals	0	0	0	0	0
Closing value	17.363	15.770	14.161	12.372	11.495

Carry forward tax losses

745. For reasons outlined in paragraph 736, the ERA has revised the method used to calculate estimated taxable income so that it is correctly based on total revenue (unsmoothed) rather than tariff revenue (smoothed).

746. Using the ERA's updated method for calculating estimated taxable income (using unsmoothed total revenue), the ERA determines that GGT does not incur accrued tax losses in the final regulatory year of AA3 and, hence, there is no tax loss to carry forward, as calculated in the draft decision.

747. The estimated taxable income calculated by the ERA for each regulatory year in AA4, based on unsmoothed total revenue, is set out in Table 90.

Table 90: ERA's final decision estimated taxable income for AA4, based on unsmoothed total revenue ($ million nominal)

	2020	2021	2022	2023	2024
Estimated taxable income	14.770	16.014	16.633	16.840	16.308
Carried forward tax loss	0	0	0	0	0
Estimated taxable income (Net of tax losses)	**14.770**	**16.014**	**16.633**	**16.840**	**16.308**

Estimated cost of corporate income tax

748. The ERA's calculation of the estimated cost of corporate income tax (net of imputation credits) for each regulatory year in AA4 is set out in Table 91.[276]

Table 91: ERA's final decision calculation of the estimated cost of corporate income tax for AA4 ($ million nominal)

	2020	2021	2022	2023	2024
Revenue					
Total (unsmoothed) revenue	41.472	42.828	43.350	43.071	42.383
Operating expenditure	17.131	17.294	17.744	17.494	18.074
Tax depreciation	6.993	6.853	6.653	6.445	6.234
Debt servicing costs	2.578	2.668	2.320	2.292	1.768
Total expenses	**26.701**	**26.814**	**26.717**	**26.232**	**26.075**
Estimated taxable income	14.770	16.014	16.633	16.840	16.308
Carried forward tax loss	0	0	0	0	0
Estimated taxable income (Net of tax loss)	**14.770**	**16.014**	**16.633**	**16.840**	**16.308**
Estimated income tax payable	4.431	4.804	4.990	5.052	4.892
Value of imputation credits	(2.216)	(2.402)	(2.495)	(2.526)	(2.446)
Estimated cost of corporate income tax	**2.216**	**2.402**	**2.495**	**2.526**	**2.446**

Required Amendment 8

The estimated cost of corporate income tax must reflect the values in Table 91 of this final decision.

Allocation of total revenue

749. The NGR require total revenue to be allocated between reference services and other services on an allocation of cost basis.

750. Rule 93(2) of the NGR states how costs are to be allocated between reference and other services:

[276] These calculations will be revised annually as part of the tariff variation process that includes an update to the debt risk premium.

93 Allocation of total revenue and costs

(1) Total revenue is to be allocated between reference and other services in the ratio in which costs are allocated between reference and other services.

(2) Costs are to be allocated between reference and other services as follows:

(a) costs directly attributable to reference services are to be allocated to those services; and

(b) costs directly attributable to pipeline services that are not reference services are to be allocated to those services; and

(c) other costs are to be allocated between reference and other services on a basis (which must be consistent with the revenue and pricing principles) determined or approved by the [ERA].

751. The NGR further allow some pipeline services, other than reference services, to be classed as rebateable services, with part of the revenue from the sale of these services to be rebated or refunded to users of reference services in specified circumstances (rules 93(3) and 93(4) of the NGR).

752. In March 2019, the NGR were amended to provide clarity on the allocation of costs between reference services and other services. Rules 79(6) and 91(2) of the NGR were added to the NGR governing the determination of conforming capital and operating expenditure.

79 New capital expenditure criteria

…

(6) Conforming capital expenditure that is included in an access arrangement revision proposal must be for expenditure that is allocated between:

(a) reference services;

(b) other services provided by means of the covered pipeline; and

(c) other services provided by means of uncovered parts (if any) of the pipeline,

in accordance with rule 93.

91 Criteria governing operating expenditure

…

(2) The forecast of required operating expenditure of a pipeline service provider that is included in the full access arrangement must be for expenditure that is allocated between:

(a) reference services;

(b) other services provided by means of the covered pipeline; and

(c) other services provided by means of uncovered parts (if any) of the pipeline,

in accordance with rule 93.

GGT's initial proposal

753. GGT's initial proposal made no allocation of total revenue between reference and other services. GGT allocated costs between covered and uncovered services prior to the calculation of total revenue as required by rule 79(6) of the NGR for capital expenditure and rule 91(2) of the NGR for operating expenditure.

Draft decision

754. GGT noted that it could provide other pipeline services, including ancillary haulage services. However, all the current gas transportation agreements with users of the covered pipeline were for the provision of firm services (reference services). There was no forecast use of other pipeline services on the covered pipeline. As a result, the ERA considered that there was no need to allocate revenue and costs between reference and non-reference services.

GGT's response to the draft decision

755. GGT did not revise its proposal for the allocation of total revenue. As with its initial proposal, GGT allocated costs between covered and uncovered services prior to the calculation of total revenue as required by rules 79(6) and 91(2) of the NGR for capital and operating expenditures respectively.

Final decision

756. There has been no change to the forecast use of pipeline services on the covered pipeline. That is, the current gas transportation agreements with users of the covered pipeline are for the provision of firm services (reference services). There is no forecast use of other pipeline services on the covered pipeline. As a result, the ERA considers that there is no need to allocate revenue and costs between reference and non-reference services.

Reference tariffs

757. Rule 92 of the NGR requires the equalisation (in terms of present values) of the portion of total revenue allocated to reference services and the forecast revenue from reference services over the access arrangement period.

758. Rule 95 of the NGR sets out the requirements for determining reference tariffs for transmission pipelines.

> **95 Tariffs – transmission pipelines**
>
> (1) A tariff for a reference service provided by means of a transmission pipeline 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.
>
> (2) The portion of total revenue referable to a particular reference service is determined as follows:
>
> (a) costs directly attributable to each reference service are to be allocated to that service; and
>
> (b) other costs attributable to reference services are to be allocated between them on a basis (which must be consistent with the revenue and pricing principles) determined or approved by the [ERA].
>
> (3) The portion of total revenue referable to providing a reference service to a particular user or class of users is determined as follows:

(a) costs directly attributable to supplying the user or class of users are to be allocated to the relevant user or class; and

(b) other costs are to be allocated between the user or class of users and other users or classes of users on a basis (which must be consistent with the revenue and pricing principles) determined or approved by the [ERA].

759. Rule 96 of the NGR allows the service provider to propose a discount for a particular user or prospective user, or a particular class of users or prospective users. The ERA may approve a discount only if it is necessary to respond to competition from other providers of pipeline services or other sources of energy or maintain efficient use of the pipeline. The provision of the discount must also likely lead to reference or equivalent tariffs being lower than they would otherwise have been.

GGT's initial proposal

760. Section 4.1 of the (current) access arrangement details the reference tariff and charges for the Firm Service – the only reference service offered under the access arrangement.

761. GGT did not make any changes to the approach used to set the reference tariff. The approach remains the same as the approach used to set the reference tariff for the current (AA3) access arrangement, which is a three-part tariff comprising:

- a toll tariff – a capacity-based charge
- a capacity reservation tariff – a capacity and distance-based charge
- a throughput tariff – a throughput and distance-based charge.

762. GGT submitted:[277]

> The toll tariff and the capacity reservation tariff are effectively access fees recovering the fixed costs of the Covered Pipeline. The throughput tariff recovers variable costs.
>
> By structuring the capacity reservation and throughput tariffs as distance-related prices, [GGT] has sought to make the reference tariff reflective of the costs of the resources used to provide pipeline service to individual users at different locations along the GGP.

763. GGT calculated the proposed reference tariff assuming the allocation of its total revenue requirement in the following proportions:[278]

- Toll tariff: 11.3 per cent
  - The toll tariff was calculated as the price during the period 2020 to 2024 which set the present value of the forecast revenue from the tariff equal to 11.3 per cent of the present value of total revenue. The discount rate used to calculate the present values was the proposed allowed rate of return (5.56 per cent).
- Capacity reservation tariff: 72.2 per cent
  - The capacity reservation tariff was calculated as the price during the period 2020 to 2024 which set the present value of the forecast revenue from the tariff equal to 72.2 per cent of the present value of total revenue. The

[277] GGT, *Proposed Revised Access Arrangement Information*, 1 January 2019, p. 24.

[278] GGT, *Proposed Revised Access Arrangement Information*, 1 January 2019, pp. 24 and 25.

discount rate used to calculate the present values was the proposed allowed rate of return (5.56 per cent).

- Throughput tariff: 16.5 per cent
  - The throughput tariff was calculated as the price during the period 2020 to 2024 which set the present value of the forecast of revenue for the tariff equal to 16.5 per cent of the present value of total revenue. The discount rate used to calculate the present values was the proposed allowed rate of return (5.56 per cent).

764. GGT's proposed tariffs, using the approach set out above, are shown in Table 92.

Table 92: GGT's proposed reference tariffs for AA4

Component/charge	Unit of measure*	Tariff
Toll tariff	$/GJ MDQ	0.139646
Capacity reservation tariff	$/GJ MDQ km	0.000846
Throughout tariff	$/GJ km	0.000231

Source: GGT, Proposed Revised Access Arrangement Information, 1 January 2019, p. 25, Table 15.

** GJ = gigajoule, MDQ = maximum daily quantity, km = kilometre*

765. GGT noted its proposed tariff was about 26 per cent higher than the tariff that applied during the period 1 July 2016 to 31 December 2019. GGT submitted:[279]

> [The tariff increase] is a consequence of the higher (December 2014) tariff continuing to apply until 30 June 2016, when the ERA made its Final Decision on the last proposed revisions to the GGP Access Arrangement. If there had been no interval of delay (1 January 2015 to 30 June 2016), the reference tariff for the period 2015 to 2019 would have been lower, and the tariff for 2020 to 2024 would have been around 10% lower than that lower tariff. That is, if there had been no interval of delay, the GGP reference tariff would have fallen, in real terms, by about 6%.

Draft decision

766. There were no submissions to the ERA addressing GGT's proposed reference tariff for the Firm Service. GGT retained the same three-part tariff structure that exists for AA4. In its draft decision, the ERA applied GGT's proposed percentage allocation of total revenue to the three tariff components. These percentage allocations have been used since the first access arrangement for the GGP.

767. In the absence of any reason to amend the tariff structure and allocation of total revenue between tariff components, the ERA considered that GGT's proposed tariff structure was consistent with the requirements of the NGR.

768. GGT's proposed toll, capacity reservation and throughput tariffs for AA4 were 21.85 per cent, 38.92 per cent, and 3.13 per cent higher than the current (1 July to 30 September 2019) approved tariffs for the GGP (Table 93).[280]

[279] GGT, *Access Arrangement Revision Proposal Supporting Information*, 1 January 2019, p. 97.

[280] As published on the ERA's website (online) (accessed July 2019).

Table 93: Comparison of GGT's proposed tariff and current tariff for the GGP ($ nominal)

Tariff component	Current tariff (1 July 2019 to 30 September 2019)	GGT proposed AA4 tariff	Change (%)
Toll ($/GJ MDQ)	0.114604	0.139646	21.85
Capacity reservation ($/GJ MDQ km)	0.000609	0.000846	38.92
Throughout ($GJ/km)	0.000224	0.000231	3.13

769. The ERA assessed GGT's proposed tariff with reference to rules 92 and 95 of the NGR and the revenue and pricing principles in the NGL. The ERA must approve an access arrangement that includes tariffs that comply with rule 92, which allows GGT to recover the portion of total revenue allocated to reference services.

770. Table 94 shows the reference tariffs calculated by the ERA for AA4, consistent with the ERA's calculation of total revenue (see paragraph 137) and the allocation of that revenue to reference services (see paragraph 754). The calculated tariffs will vary based on the tariff variation mechanism (see paragraph 783).

Table 94: ERA's draft decision reference service tariff for AA4

Tariff component	Tariff
Toll ($/GJ MDQ)	0.126564
Capacity reservation ($/GJ MDQ km)	0.000767
Throughout ($GJ/km)	0.000210

771. The revised toll and capacity reservation reference tariffs were 10.44 per cent and 25.87 per cent higher while the throughput reference tariff was 6.42 per cent lower than the current (1 July 2019 to 30 September 2019) approved tariffs for the GGP (Table 95).

Table 95: Comparison of ERA draft decision tariff and current tariff for the GGP ($ nominal)

Tariff component	Current tariff (1 July 2019 to 30 September 2019)	Draft decision AA4 tariff	Change (%)
Toll ($/GJ MDQ)	0.114604	0.126564	10.44
Capacity reservation ($/GJ MDQ km)	0.000609	0.000767	25.87
Throughout ($GJ/km)	0.000224	0.000210	(6.42)

772. As noted by GGT in its initial proposal, the interval of delay during AA3 (18 months) resulted in tariffs that were lower at the end of that access arrangement period than they would have otherwise been.[281] This was due to the continuation of AA2 tariffs during the delay that were higher than those needed to recover the approved AA3

[281] The interval of delay is the period between the intended start date of the access arrangement (1 January 2015) and the actual commencement date (1 July 2016). The interval of delay was 18 months.

revenue. There was only a 0.35 per cent difference between the total revenue in the final year of AA4 (2024) and the tariff revenue for that year, which should reduce the likelihood of a large tariff change for the next access arrangement period (AA5).

773. The ERA required GGT to amend its reference tariffs consistent with the ERA's calculation of total revenue:

> **Draft Decision Required Amendment 10**
>
> GGT must amend Schedule A of the access arrangement with the reference service tariffs in Table 61 of [the] draft decision. [Table 94 of this final decision]

GGT's response to the draft decision

774. GGT revised its proposed reference tariffs to allow for recovery of its revised proposed total revenue.

775. GGT's revised proposed reference tariffs used the same method from its initial proposal (see paragraphs 760 to 763). GGT's revised proposed reference tariffs are shown in Table 96. GGT's proposed toll and capacity reservation tariffs for AA4 are 14.91 per cent and 30.93 per cent higher than the current (1 October to 31 December 2019) approved tariffs for the GGP, while the proposed throughput tariff is 2.67 per cent lower.[282]

Table 96: GGT's revised proposed reference service tariffs for AA4 ($ nominal)

Tariff component	Tariff
Toll ($/GJ MDQ)	0.132024
Capacity reservation ($/GJ MDQ km)	0.000800
Throughout ($GJ/km)	0.000219

Final decision

776. GGT was required to amend its reference tariffs consistent with the ERA's draft decision total revenue requirement. GGT did not accept this required amendment as it proposed changes to the amount of total revenue that would need to be recovered from reference tariffs.

777. The ERA maintains its draft decision position that, in the absence of any reason to amend the tariff structure and allocation of total revenue between tariff components, GGT's proposed tariff structure is consistent with the requirements of the NGR.

778. Table 97 shows a comparison of the percentage changes in GGT's initial and revised proposals and the ERA's draft and final decision tariffs from the current approved tariffs (December quarter 2019).

779. The revised toll and capacity reservation reference tariffs are 3.72 per cent and 18.10 per cent higher while the throughput reference tariff is 12.33 per cent lower than the current (1 October 2019 to 31 December 2019) approved tariffs for the GGP (Table 97).

[282] As published on the ERA's website (online) (accessed December 2019).

Table 97: Comparison of the ERA's final decision nominal tariff price change on 1 January 2020 (%)[283]

	Initial proposal	Draft decision	Revised proposal	Final decision
Toll ($/GJ MDQ)	21.55	10.16	14.91	3.75
Capacity reservation ($/GJ MDQ km)	38.46	25.53	30.93	18.17
Throughout ($GJ/km)	2.67	(6.67)	(2.67)	(12.44)

Source: ERA analysis

780. The ERA assessed GGT's revised proposed tariff with reference to rules 92 and 95 of the NGR and the revenue and pricing principles in the NGL. The ERA must approve an access arrangement that includes tariffs that comply with rule 92, which allows GGT to recover the portion of total revenue allocated to reference services.

781. Table 98 shows the reference tariffs calculated by the ERA for the final decision for AA4, consistent with the ERA's calculation of total revenue (see paragraph 143) and the allocation of that revenue to reference services (see paragraph 756). The calculated tariffs will vary based on the tariff variation mechanism (see paragraphs 795 and 796).

Table 98: ERA's final decision reference service tariffs ($ nominal)

Tariff component	Tariff
Toll ($/GJ MDQ)	0.119199
Capacity reservation ($/GJ MDQ km)	0.000722
Throughout ($GJ/km)	0.000197

Source: ERA, Final Decision, Appendix 7, GGP Tariff Model, December 2019.

782. As noted by GGT in its initial proposal, the interval of delay during AA3 (18 months) resulted in tariffs that were lower at the end of that access arrangement period than they would have otherwise been.[284] This was due to the continuation of AA2 tariffs during the delay, being tariffs that were higher than those needed to recover the approved AA3 revenue. There is only a 0.68 per cent difference between the total revenue in the final year of AA4 (2024) and the tariff revenue for that year which should reduce the likelihood of a large tariff change for the next access arrangement period (AA5).

283 The initial proposal and draft decision percentage changes in Table 97 are different to the values expressed in the draft decision, and which are reproduced in Table 93 and Table 95 of this final decision. The difference is that Table 97 measures the change in tariffs from the current approved tariffs for the December quarter 2019 whereas this was not available at the time of the draft decision and the percentage changes were calculated from the September quarter 2019 tariff.

284 The interval of delay is the period between the intended start date of the access arrangement (1 January 2015) and the actual commencement date (1 July 2016). The interval of delay was 18 months.

Required Amendment 9

Schedule A of the access arrangement must be amended to reflect the tariffs set out in Table 98 of this final decision.

Tariff variation mechanism

783. Rule 92 of the NGR requires GGT to include a reference tariff variation mechanism to vary reference tariffs over the course of the access arrangement period:

> **92 Revenue equalisation**
>
> (1) A full access arrangement must include a mechanism (a reference tariff variation mechanism) for variation of a reference tariff over the course of an access arrangement period.
>
> (2) Except to the extent that subrule (3) applies, the reference tariff variation mechanism must be designed to equalise (in terms of present values):
>
> (a) forecast revenue from reference services for the access arrangement period; and
>
> (b) the portion of total revenue allocated to reference services for the access arrangement period.
>
> (3) If there is an interval between a revision commencement date stated in a full access arrangement and the date on which revisions to the access arrangement actually commence (the interval of delay):
>
> (a) reference tariffs, as in force at the end of the previous access arrangement period, must continue without variation for the interval of delay; but
>
> (b) the operation of this subrule must be taken into account in fixing reference tariffs for the new access arrangement period, such that there may be an adjustment for any under-recovery or over-recovery by the service provider as a result of the continuation of reference tariffs from the previous access arrangement period during the interval of delay.
>
> (4) For the avoidance of doubt, once the revisions to an access arrangement actually commence the access arrangement period to which the revised access arrangement applies includes the interval of delay.

784. Rule 97 of the NGR specifies the required mechanics for a reference tariff variation:

> **97 Mechanics of reference tariff variation**
>
> (1) A reference tariff variation mechanism may provide for variation of a reference tariff:
>
> (a) in accordance with a schedule of fixed tariffs; or
>
> (b) in accordance with a formula set out in the access arrangement; or
>
> (c) as a result of a cost pass through for a defined event (such as a cost pass through for a particular tax); or
>
> (c1) as a result of the application of a portion of the revenue generated from the sale of rebateable services to reduce the reference tariff as contemplated under rule 93(3); or
>
> (d) by the combined operation of 2 or more or the above.
>
> (2) A formula for variation of a reference tariff may (for example) provide for:

(a) variable caps on the revenue to be derived from a particular combination of reference services; or

(b) tariff basket price control; or

(c) revenue yield control; or

(d) a combination of all or any of the above.

(3) In deciding whether a particular reference tariff variation mechanism is appropriate to a particular access arrangement, the [ERA] must have regard to:

(a) the need for efficient tariff structures; and

(b) the possible effects of the reference tariff variation mechanism on administrative costs of the [ERA], the service provider, and users or potential users; and

(c) the regulatory arrangements (if any) applicable to the relevant reference services before the commencement of the proposed reference tariff variation mechanism; and

(d) the desirability of consistency between regulatory arrangements for similar services (both within and beyond the relevant jurisdiction); and

(d1) the risk sharing arrangements implicit in the access arrangement; and

(e) any other relevant factor.

(4) A reference tariff variation mechanism must give the [ERA] adequate oversight or powers of approval over variation of the reference tariff.

(5) Except as provided by a reference tariff variation mechanism, a reference tariff is not to vary during the course of an access arrangement period.

GGT's initial proposal

785. The reference tariff variation mechanism for the GGP is detailed in section 4.5 and Schedule A of the current access arrangement and comprises:

- A scheduled reference tariff variation mechanism, which provides for quarterly variations and an annual variation of the reference tariff.
- A cost pass-through variation of the reference tariff.

786. For AA4, GGT proposed to simplify the reference tariff variation mechanism by removing the quarterly scheduled variations of the reference tariff but retaining the annual scheduled variation and cost pass-through variation mechanisms.[285]

787. GGT proposed that the quarterly adjustment would be unnecessary if, during the access arrangement period, inflation was not expected to rise or fall significantly from the level assumed at the time of the reference tariff determination. GGT observed that the Reserve Bank of Australia forecast relatively stable inflation up to mid-2020.[286] Even if inflation were to vary significantly from the assumed level of

[285] Goldfields Gas Transmission Pty Ltd, *Goldfields Gas Pipeline Revised Access Arrangement Revision Proposal Supporting Information*, 21 December 2018, p. 100.

[286] Reserve Bank of Australia, *Statement on Monetary Policy*, August 2018, p. 63 cited in GGT, *Goldfields Gas Pipeline Revised Access Arrangement Revision Proposal Supporting Information*, 21 December 2018, p. 100.

inflation built into GGT's reference tariff model, GGT expected that the reference tariff would be adjusted for the effect of that variation through the inflation adjustment in the annual scheduled variation.

788. GGT also proposed that the removal of the quarterly adjustment from the reference tariff variation mechanism should: [287]

- Not change the efficiency of the GGP tariff structure. The adjustment for price change would continue to be made, but less frequently.
- Reduce administrative costs for GGT, the ERA and pipeline users because the reference tariff would only be adjusted once (annually) for inflation instead of four times (quarterly).
- Align the reference tariff variation with the annual variation of tariffs for negotiated services provided using the GGP.
- Align the reference tariff variation for the GGP with the variation of tariffs for reference services provided using the Dampier to Bunbury Natural Gas Pipeline (DBNGP), from which gas was delivered into the GGP.

Draft decision

789. GGT's proposed tariff variation mechanism for AA4 removed the quarterly variations (adjustments) from the mechanism. The remaining components of the mechanism – the annual variation of the reference tariff and cost pass-through of the reference tariff – were unchanged from AA3.

790. GGT submitted that quarterly adjustments of the reference tariffs were unnecessary. The effect of actual inflation on the reference tariff could be dealt with through the inflation adjustment in the annual scheduled variation. The removal of the quarterly adjustment from the tariff variation mechanism simplifies the mechanism and, as submitted by GGT:

- did not change the efficiency of the tariff structure
- reduced administrative work and costs
- aligned the reference tariff with the annual variation of tariffs for:
  - negotiated services provided by the GGP
  - the DBNGP that delivered gas into the GGP.

791. There were no submissions concerning GGT's proposed amendments to the tariff variation mechanism, or other components of the mechanism that remain unchanged from AA3.

792. GGT's proposed amendments to the tariff variation mechanism by removing the quarterly tariff variations would reduce the administrative burden on both GGT and the ERA with no loss in the efficiency of the tariff structure. For these reasons, and in the absence of any opposing reason from stakeholders, the ERA, in its draft decision, considered that GGT's proposed amendments met the requirements of the NGR and were consistent with the national gas objective.

[287] GGT, *Goldfields Gas Pipeline Revised Access Arrangement Revision Proposal Supporting Information*, 21 December 2018, p. 100.

793. However, the ERA identified three minor matters that needed to be addressed in the tariff variation formula in Schedule A of the access arrangement. The value of forecast inflation (Z) needed to be updated to the value to be used for the final decision and there was a definition for a parameter (Y) in the limit on movement of the weighted average tariff basket formula that needed to be deleted. Also, the calculation of the X factor parameter needed to be revised to use the present value of tariff revenue and tariffs that were calculated by the tariff model. The ERA required those values in the X factor parameter to be revised as follows:

PVR^i is the present value of tariff revenue as calculated by the tariff model for tariff component i and is calculated as:

$$\left(\sum_{j=1}^{t-1} \frac{p_j^i q_j^i}{(1+r_j)} + \sum_{j=t}^{4} \frac{p_t^i q_j^i}{(1+r_j)} \right);$$

p_j^i is the tariff component i in period j as calculated by the tariff model;

Draft Decision Required Amendment 11

GGT must amend the tariff variation formulas in Schedule A of the access arrangement (pages 40 and 41) to update the definition of inflation ("Z") to reflect the value of inflation used in this draft decision, and ultimately the value used in the ERA's final decision. The 'limit on movement of the weighted average tariff basket' formula must delete the definition of "Y" because this component is not used in that formula. The X factor parameter must be revised to use the present value of tariff revenue and tariffs that are calculated by the tariff model.

GGT's response to the draft decision

794. GGT accepted draft decision required amendment 11. The tariff variation formulas in Schedule A of the access arrangement for the GGP have been amended in accordance with the ERA's draft required amendment 11.

Final decision

795. The ERA notes that while GGT addressed the ERA's draft decision required amendment 11, the value of forecast inflation used in the tariff variation formulas needs to be amended to the value of forecast inflation used in the ERA's final decision. The value of inflation and other market-based parameters for the return on capital were determined subsequent to GGT providing its revised proposal (see paragraphs 648 to 651 of this final decision).

796. The value of forecast inflation (Z) used in the tariff variation formulas in Schedule A of the access arrangement must be amended to reflect the value of 1.14 per cent, which is the value of forecast inflation used in this final decision.

Required Amendment 10

The tariff variation formulas in Schedule A of the access arrangement (pages 47 and 48) must be amended to update the definition of inflation ("Z") to reflect the value of inflation used in this final decision (1.14 per cent).

Fixed principles

797. Rule 99 of the NGR allows for an access arrangement to include fixed principles:

> **99 Fixed principles**
>
> (1) A full access arrangement may include a principle declared in the access arrangement to be fixed for a stated period.
>
> (2) A principle may be fixed for a period extending over 2 or more access arrangement periods.
>
> (3) A fixed principle approved before the commencement of these rules, or approved by the [ERA] under these rules, is binding on the [ERA] and the service provider for the period for which the principle is fixed.
>
> (4) However:
>
> (a) the [ERA] may vary or revoke a fixed principle at any time with the service provider's consent; and
>
> (b) if a rule is inconsistent with a fixed principle, the rule operates to the exclusion of the fixed principle.

GGT's initial proposal

798. There are no fixed principles in the current access arrangement for the GGP. GGT did not propose to include any fixed principles its initial proposed revised access arrangement for the fourth access arrangement period (AA4).

Draft decision

799. GGT did not propose any fixed principles for AA4 and there were no submissions from interested parties seeking any amendments to introduce fixed principles in the access arrangement. As such, the ERA did not give any further consideration to the matter of fixed principles in the draft decision.

GGT's response to the draft decision

800. GGT did not propose any fixed principles in its revised proposal.

Final decision

801. GGT's revised proposal did not include any fixed principles. There were no submissions from interested parties on fixed principles. Therefore, consistent with the draft decision, the ERA has not given any further consideration to the matter of fixed principles in this final decision.

Terms and conditions

802. Modified rule 48(1)(e)(ii) of the NGR requires the GGP access arrangement to detail, in addition to the reference tariff, the other terms and conditions for each reference service.[288]

803. Rule 100 of the NGR details the requirements for consistency which the ERA must take into consideration when assessing any proposed amendment to access arrangement terms and conditions:

> **100 General requirement for consistency**
>
> (1) The provisions of an access arrangement must be consistent with:
>
> (a) the national gas objective; and
>
> (b) these rules and the procedures as in force when the terms and conditions of the access arrangement are determined or revised.
>
> (2) In deciding whether the non-tariff terms and conditions of an access arrangement are appropriate, the [ERA] must have regard to the risk-sharing arrangements implicit in the reference tariff.

GGT's initial proposal

804. The terms and conditions applying to the Firm Service (the only reference service offered) are set out in Schedules D and T of the initial proposed revised access arrangement.[289, 290] GGT proposed several amendments to these terms and conditions, which were detailed in supporting information to the access arrangement and shown in a marked-up copy of the access arrangement.[291]

805. Table 99 summarises the proposed amendments to the terms and conditions included in GGT's initial proposal, which comprised:

- Formatting, referencing and typographical corrections.
- Amendments to specific clauses, including the deletion of some clauses and the addition of new clauses.
- Amendments to the defined terms, including the deletion of some terms and the addition of new terms.

288 Under transitional provisions, modified rule 48(1)(e)(ii), as set out in Schedule 1 (rule 62), applies to the access arrangement for the GGP. This modified rule is the same as rule 48(1)(d)(ii) of the NGR except for its numbering.

289 GGT, 21 December 2018, *Goldfields Gas Pipeline Revised Access Arrangement 1 January 2020*, Schedule D (Terms and Conditions applying to the Firm Service).

290 GGT, 21 December 2018, *Goldfields Gas Pipeline Revised Access Arrangement 1 January 2020*, Schedule T (C1 Definitions and Interpretation).

291 GGT, 21 December 2018, *Goldfields Gas Pipeline Revised Access Arrangement (changes tracked) 1 January 2020*.

Table 99: Summary of GGT's proposed amendments to the terms and conditions for the Firm Service included in its initial proposal

Clause reference	Description of and reason for proposed amendment
D.8 A.4 D.8 A.5 D.9.2 D.9.3 D.9.4 D.12.1(b) D.32.2(e) D.34.3 T C1.1 Developable Capacity T C1.1 Extension T C1.1 Receipt Point MHQ	Amendments were proposed to these clauses to correct formatting, referencing or typographical errors. These amendments were administrative in nature and did not substantially alter the terms and conditions applying to the Firm Service. For example: • The reference in clause D.8 A.4 to "clause D.5.45" was incorrect. The amended reference was to "clause D.5.5". • The words "If the user request an…" in clause D.8 A.5 was grammatically incorrect and was changed to "If the user requests an…". • The words "applicable Toll Tariff" in clause D.9.2 changed to "Applicable Toll Tariff" to reflect the amended term in T C1.1 (Definitions). Similar changes were made to words in clauses D.9.3 and D.9.4.
D.9.5	Clause D.9.5 was deleted. This clause was made redundant by the new definitions of "applicable toll tariff", "applicable capacity reservation tariff" and "applicable throughput tariff".
D.24.5 D.25.4	Clause D.24.5 was deleted. This clause was made redundant by the new definition of "receipt point". Consequently, the words "at the receipt facilities referred to in clause D.24.5" in clause D.25.4 were deleted.
D.34.5	Clause D.34.5 was deleted. The deleted clause was redundant given clause D.42, which substantively reproduced the clause with the exception of references to clauses D.34.1 and D.35.6.
D.40	Clause D.40 was amended to include provision for notices by email. Email has largely replaced communications formerly made by mail and facsimile.
D.48	New clause D.48 (Counterparts) was proposed to allow the transportation agreement to be executed in counterparts.
T C1.1 [new defined terms]	New definitions were proposed for the following terms. • Applicable Capacity Reservation Tariff • Applicable Throughput Tariff • Applicable Toll Tariff The definitions were the same definitions used in the access arrangement and were included to clarify that the tariff which applies is the tariff as varied from time-to-time in accordance with the reference tariff variation mechanism.
T C1.1 As Available Service	Defined term deleted from T C1.1. No such service is offered by means of the Goldfields Gas Pipeline. An "as available service" is a form of interruptible service, which can be provided as a non-reference service.

Clause reference	Description of and reason for proposed amendment
T C1.1: Delivery Point MDQ[292] Firm MDQ Firm MHQ[293] Receipt Point MDQ	In each of these defined terms the words "Order Form/Form of Agreement" were replaced with the words "Transportation Agreement". The "delivery point MDQ", "firm MDQ", "firm MHQ" and "receipt point MDQ" were all specified in the user's transportation agreement.
T C1.1 Receipt Point	Defined term was expanded to clarify and more accurately reflect that there are two receipt points on the Goldfields Gas Pipeline, both located upstream of the Yarraloola Compressor Station. The extended definition was the same definition used in the access arrangement.
T C1.1 Relevant Date	Defined term was updated to change the date from 1 August 2014 to 1 January 2019. This reflects the review submission date for the fourth access arrangement period.

Source: GGT, Access Arrangement Revision Proposal Supporting Information (Public), 1 January 2019, Table 48, pp. 111-114.

Draft decision

806. The ERA considered GGT's proposed amendments to the terms and conditions for the Firm Service.

807. GGT's proposed amendments that comprised minor formatting, referencing or typographical corrections, unless otherwise stated, were administrative in nature and did not materially alter the agreement. The amendments also did not materially affect consistency with the national gas objective or requirements of the NGR.

808. The ERA separately considered GGT's proposed amendments to the drafting of specific clauses and defined terms.

Clause D.9 (reference tariff and charges)

809. Clause D.9 set out terms and conditions for the reference tariff and charges. Subclause D.9.5 stated:

> D.9.5 Toll, Capacity Reservation and Throughput Tariffs
>
> The Toll, Capacity Reservation and Throughput Tariffs to apply in the first Year of the Access Arrangement Period are set out in the Details, and will be adjusted each Year in accordance with the Reference Tariff Variation Mechanism set out in section 4.5.

810. GGT deleted clause D.9.5 because it considered the clause redundant following proposed amendments to introduce three new defined terms: "applicable toll tariff", "applicable capacity reservation tariff" and "applicable throughput tariff". The ERA considered GGT's proposed amendments to the terms and conditions to introduce new defined terms and delete clause D.9.5 as part of its considerations on Clause T C1, which details the definitions and interpretation used in the terms and conditions (see paragraph 828).

[292] Maximum Daily Quantity (MDQ).

[293] Maximum Hourly Quantity (MHQ).

Clause D.24 (connection to the pipeline) and clause D.25 (receipt pressures)

811. Clause D.24 set out terms and conditions for the connection to the pipeline. Subclause D.24.5 stated:

> D.24.5 The Pipeline has Receipt Facilities at Yarraloola for receiving Gas from:
>
> (a) the Harriet and East Spar Joint Ventures' pipelines at Yarraloola in the vicinity of the inlet to the Pipeline; and
>
> (b) the DBNGP in the vicinity of the inlet to the Pipeline.

812. GGT deleted clause D.24.5 (and words referencing clause D.24.5 in clause D.25.4) because it considered the clause redundant following proposed amendments to the definition of "receipt point". The ERA considered GGT's proposed amendment to the definition of receipt point as part of its considerations on Clause T C1, which details the definitions and interpretation used in the terms and conditions (see paragraph 836).

Clause D.34 (limitation of liability and indemnity)

813. Clause D.34 set out terms and conditions for the limitation of liability and indemnity. GGT submitted that clause D.34.5 was redundant and could be deleted from the terms and conditions because clause D.42 substantively reproduced the provisions of this clause.

814. Clause D.34.5 detailed provisions for the service provider to provide a refund or credit to the user in circumstances where the Firm Service was not provided such that the user did not receive gas for more than 48 consecutive hours, and the failure to provide gas was directly or indirectly caused by the service provider.

815. Clause D.42 sets out the terms and conditions for refunds and credits. The clause is substantively the same as clause D.34.5 was, except for references to clauses D.34.1 and D.35.6 (Table 100).

Table 100: Terms and conditions applying to the firm service – comparison of clauses D.34.5 and D.42

Clause D.34.5	Clause D.42
Notwithstanding clauses D.14.2, D.14.4, ***D.34.1*** or ***D.35.6***: ***[emphasis added]***	Notwithstanding clauses D.14.2, D.14.4 and D.35:
(a) where the Firm Service is not provided such that the User does not receive Gas for more than 48 consecutive hours and the failure or continuation of the failure to provide Gas is directly or indirectly caused by Service Provider, Service Provider will, refund or credit to the User for each period of 24 hours for which the failure continues beyond the 48 consecutive hours; and	(a) where the Firm Service is not provided such that the User does not receive Gas for more than 48 consecutive hours and the failure or continuation of the failure to provide Gas is directly or indirectly caused by Service Provider, Service Provider will, refund or credit to the User for each period of 24 hours for which the failure continues beyond the 48 consecutive hours; and
(b) the refund or credit will be calculated as "the sum of the Capacity Reservation Charge and the Toll Charge payable for each 24 hour period in excess of the initial 48 consecutive hours."	(b) the refund or credit will be calculated as "the sum of the Capacity Reservation Charge and the Toll Charge payable for each 24 hour period in excess of the initial 48 consecutive hours."

Source: GGT, Goldfields Gas Pipeline Revised Access Arrangement 1 January 2020, Schedule D (Terms and Conditions applying to the Firm Service).

816. The ERA determined that simplifying the terms and conditions, by deleting duplicate and unnecessary provisions, supported and was consistent with the national gas objective. As clauses D.34.5 and D.42 both covered refunds and credits, it was reasonable for the provisions to be included once in the terms and conditions at the point where refunds and credits were considered, being clause D.42 (Refunds and Credits).

Reference to clause D.34.1

817. Unlike clause D.34.5, clause D.42 does not refer to clause D.34.1. Clause D.34.1 states:

> Subject to clause D.34.2, unless otherwise agreed by the Parties and expressly set out in the Order Form, but otherwise despite any other provision to the contrary in the Transportation Agreement, to the extent permitted by law, neither Party (including Service Provider's and the User's Related Bodies Corporate and their respective directors, officers, employees, agents and contractors) is liable to the other Party for Consequential Loss or for punitive or exemplary damages arising in respect of the Transportation Agreement except where such Consequential Loss or punitive or exemplary damage arises out of:
>
> (a) Gross Negligence or Wilful Misconduct by either the Service Provider or the User; or
>
> (b) the Service Provider's or the User's liability relating to payment liabilities arising under the Transportation Agreement.

818. Pursuant to clause D.34.1, a party's liability to the other for "consequential loss or for punitive or exemplary damages" arising in respect of the transportation agreement is limited to circumstances where the loss or damage arises out of:

- GGT's or the user's gross negligence or wilful misconduct, or
- GGT's or the user's liability relating to the payment of liabilities arising under the transportation agreement.

819. It is unlikely that a refund or credit payable under clause D.42 would constitute consequential loss or punitive or exemplary damage under clause D.34.1, and so the reference to clause D34.1 is not necessary. In any event, GGT's obligation under clause D.42 to give a refund or credit to the user where the user does not receive gas for more than 48 consecutive hours is a "liability relating to payment liabilities arising under the transportation agreement". Accordingly, GGT's liability to give a refund or credit in the circumstances covered by clause D.42 is carved out of the exclusion for consequential loss in clause D.34.1.

820. For the above reasons, the ERA determined that a user's position in respect of the provision of refunds and credits was not likely to be adversely affected if clause D.42 did not refer to clause D.34.1. Furthermore, the absence of this reference did not materially affect consistency with the national gas objective or requirements of the NGR.

Reference to clause D.35.6

821. No specific reference to clause D.35.6 is made in clause D.42. Clause D.42 does, however, refer to clause D.35 (Force Majeure), which encompasses all subclauses including clause D.35.6.

822. The ERA determined that the reference to clause D.35 (rather than D.35.6) broadened the scope of clause D.42 beyond that of clause D.34.5. The broader scope did not, however, adversely affect GGT's position as the service provider, or the position of users under the agreement. It also did not materially affect consistency with the national gas objective or requirements of the NGR.

Clause D.40 (notices)

823. Clause D.40 sets out the terms and conditions for notices. GGT submitted that email communication had largely replaced postal mail and facsimile communications. Given this, GGT amended clause D.40 to include the provision of notices by email, in addition to postal mail and facsimile.

824. The ERA determined that allowing the provision of notices by email was beneficial for parties and consistent with the national gas objective.

Clause D.48 (counterparts)

825. GGT amended the terms and conditions to include a new clause D.48 (Counterparts).

> **D.48 Counterparts**
>
> This Transportation Agreement may be executed in any number of counterparts. All counterparts will be taken to constitute one instrument.

826. Allowing an agreement to be executed in counterparts is a common feature of commercial agreements and is often beneficial for parties. The ERA determined that including a counterparts provision in the terms and conditions for the Firm Service was consistent with the national gas objective.

Clause T C1 (definitions and interpretation)

827. Clause T C1 details the definitions and interpretation used in the terms and conditions. GGT proposed to amend the definitions (clause T C1.1) to include some new defined terms and amend the definition of some existing terms.

New defined terms

828. GGT proposed to add the following new terms to the definitions. GGT submitted that these were the same terms used in the proposed revised access arrangement and were included to clarify that the tariff which applied was the tariff as varied from time-to-time in accordance with the reference tariff variation mechanism:

> **Applicable Capacity Reservation Tariff** means the Capacity Reservation Tariff specified in the GGP Access Arrangement, as varied from time to time in accordance with the Reference Tariff Variation Mechanism of the GGP Access Arrangement.
>
> **Applicable Throughput Tariff** means the Throughput Tariff specified in the GGP Access Arrangement, as varied from time to time in accordance with the Reference Tariff Variation Mechanism of the GGP Access Arrangement.
>
> **Applicable Toll Tariff** means the Toll Tariff specified in the GGP Access Arrangement, as varied from time to time in accordance with the Reference Tariff Variation Mechanism of the GGP Access Arrangement.

829. GGT submitted that its proposed new definitions made clause D.9.5 (reproduced below) redundant and that the clause should be deleted from the terms and conditions:

D.9.5 Toll, Capacity Reservation and Throughput Tariffs

The Toll, Capacity Reservation and Throughput Tariffs to apply in the first Year of the Access Arrangement Period are set out in the Details, and will be adjusted each Year in accordance with the Reference Tariff Variation Mechanism set out in section 4.5.

830. The ERA determined that GGT's proposed definitions clarified that each of the respective tariffs was specified in the access arrangement and was varied from time-to-time in accordance with the reference tariff variation mechanism. The inclusion of these new definitions made clause D.9.5 redundant. Furthermore, the proposed new definitions and deletion of clause D.9.5 did not materially affect consistency with the national gas objective or requirements of the NGR.

"As available service"

831. GGT deleted the term "as available service" from the definitions. GGT submitted that there was no such service offered by means of the GGP. An "as available service" (that is, a service provided by GGT on an as available basis) is a form of interruptible service, which could be provided as a non-reference service.[294]

832. Given there is no "as available service" offered as a reference service, a definition for this term was not required. The ERA determined that simplifying the terms and conditions, by deleting unnecessary provisions, was consistent with the national gas objective.

"Delivery point MDQ" / "Firm MDQ" / "Firm MHQ" / "Receipt point MDQ"

833. GGT amended the definitions for the following defined terms to replace the words "Order Form / Form of Agreement" with the words "Transportation Agreement":

- "delivery point MDQ"[295]
- "firm MDQ"
- "firm MHQ"[296]
- "receipt point MDQ".

834. GGT submitted that each of the above quantities were specified in the users' transportation agreement, which meant:

> Any contract entered into between the Service Provider and a User for Services for that User (including a Service Agreement where applicable) and, as regards the Firm Service, means a contract entered into between the Service Provider and a User using the Order Form and the Terms and Conditions, and where used in relation to such a User, means that User's contract for the Firm Service.

835. The ERA determined that GGT's proposed amendments clarified where the delivery point and firm and receipt point quantities were detailed (that is, in the transportation agreement) and did not materially affect consistency with the national gas objective or requirements of the NGR.

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294 "Interruptible Service" is defined to mean "the provision of Gas pipeline services by Service Provider, on a basis which in the sole discretion of Service Provider acting reasonably may be curtailed or interrupted from time to time".

295 Maximum Daily Quantity (MDQ).

296 Maximum Hourly Quantity (MHQ).

"Receipt point"

836. GGT proposed to amend the definition of "receipt point" to clarify and more accurately reflect the two receipt points on the GGP, which are both located upstream of the Yarraloola Compressor Station. The amended definition is the same definition that is used in the proposed revised access arrangement.

> **Receipt Point** is a point in the Pipeline where gas is received into the Pipeline. In respect of the Reference Service, the Receipt Points are:~~Receipt Point is the existing Receipt Point at Yarraloola;~~
>
> (a) the point located within the site of the meter station on the Varanus Island-DBNGP onshore pipeline (Pipeline Licence 17) which is the start of the GGP interconnect pipeline which terminates within the site of the Yarraloola Compressor Station (Varanus Receipt Point);
>
> (b) the point on the DBNGP-GGP interconnect pipeline 446 metres upstream of its termination within the site of the Yarraloola Compressor Station, this point being at the boundary of the DBNGP pipeline corridor and the Pipeline Licence 24 easement (upstream of this point the DBNGP-GGP interconnect pipeline is licenced by Pipeline Licence 40 (DBNGP); downstream of this point the DBNGP-GGP interconnect pipeline is licenced by Pipeline Licence 24 (GGP)) (DBNGP Receipt Point).

837. As submitted by GGT, the proposed amended definition of receipt point has made clause D.24.5 (reproduced below) redundant – the description of where gas is received into the GGP is covered by the new definition of receipt point. GGT therefore proposed to delete clause 24.5 from the terms and conditions and to delete a reference to the (now deleted) clause in clause D.25.4.[297]

> D.24.5 The Pipeline has Receipt Facilities at Yarraloola for receiving Gas from:
>
> (a) the Harriet and East Spar Joint Ventures' pipelines at Yarraloola in the vicinity of the inlet to the Pipeline; and
>
> (b) the DBNGP in the vicinity of the inlet to the Pipeline.

838. The ERA determined that GGT's amended definition of receipt point provided users with a more detailed explanation of the receipt points on the GGP. Also, the amended definition, and consequential deletions, did not materially affect consistency with the national gas objective or requirements of the NGR.

"Relevant date"

839. The term "relevant date" is used within the access arrangement and the terms and conditions applying to the Firm Service. The term is established in the definition of "pre-existing contractual right" and refers to the date that the access arrangement (or revisions to the access arrangement) was submitted, or was required to be submitted, for approval:

> **Pre-existing Contractual Right** has the meaning given to 'relevant protected contractual right' in section 321 of the National Gas Law, and the date referred to therein as the "date that (proposed) access arrangement was submitted (or required to be submitted) for approval" for the purposes of the Access Arrangement is the ***Relevant Date [emphasis added]***, and for avoidance of doubt includes any contractual right (other than a 'relevant exclusivity right' as defined in section 321 of the National Gas Law, as evidenced by the Initial Customers Agreements and the Existing Contracts.

[297] GGT deleted the words *"at the receipt facilities referred to in clause D.24.5"* in clause D.25.4.

840. GGT proposed to amend the definition of relevant date from 1 August 2014 to 1 January 2019 to reflect the review submission date for AA4 – that is, the date GGT was required to submit proposed revisions to the access arrangement for AA4.

841. The ERA determined that GGT's amended definition was consistent with the review submission date for AA4, as detailed in section 1.7 of the current (AA3) access arrangement.

GGT's response to the draft decision

842. As outlined in the draft decision considerations above (paragraphs 806 to 841), the ERA's draft decision accepted GGT's initial proposal to amended the terms and conditions for the Firm Service. GGT's proposed amendments were consistent with the national gas objective and met the requirements of the NGR.

843. GGT did not propose any further amendments to the terms and conditions applying to the Firm Service in its revised proposal.

Final decision

844. GGT has not proposed any further amendments to the terms and conditions applying to the Firm Service in its revised proposal. There were no submissions from interested parties on the terms and conditions.

845. The ERA maintains the positions in its draft decision as detailed at paragraphs 806 to 841 of this final decision. The ERA considers that, for the reasons specified in these paragraphs, the terms and conditions applying to the Firm Service are consistent with the national gas objective and requirements of the NGR.

Other access arrangement provisions

Application procedures and queuing requirements

846. Rule 112 of the NGR details the requirements for requesting access to a pipeline service.

847. As outlined at paragraph 35, changes to the NGR occurred in March 2019 (after GGT's access arrangement proposal submission to the ERA). These changes affected rule 112 of the NGR, which details the requirements for requesting access. The new requirements for requesting access apply to this access arrangement review and are reproduced below:

> **112 Requests for access**
>
> (1) A prospective user may request a scheme pipeline service provider to provide a pipeline service for the prospective user. For the purposes of this rule 112, the date that the prospective user's access request is received by the service provider is referred to as the "access request date".
>
> (2) The request must be made in writing and must:
>
> (a) state the time or times when the pipeline service will be required and the capacity that is to be utilised; and
>
> (b) identify the entry point where the user proposes to introduce natural gas to the pipeline or the exit point where the user proposes to take natural gas from the pipeline or, if the requested service is a haulage service, both entry and exit point; and
>
> (c) state the relevant technical details (including the proposed gas specification) for the connection to the pipeline, and for ensuring safety and reliability of the supply of natural gas to, or from, the pipeline.
>
> (3) The service provider must:
>
> (a) within 5 business days after the access request date, acknowledge receipt of the request; and
>
> (b) within 10 business days after the access request date, inform the prospective user:
>
> (i) that it is able to provide the requested pipeline service;
>
> (ii) that it needs to carry out further investigation to determine whether it can provide the requested pipeline service and provide the prospective user with a statement of the nature of the investigation and the reasonable costs of the investigation the prospective user would be required to meet; or
>
> (iii) that it is unable to provide the requested pipeline service.
>
> (4) If the service provider is unable to provide the requested pipeline service, it must:
>
> (a) provide the prospective user with written reasons explaining why the requested pipeline service cannot be provided; and
>
> (b) if there is some prospect that it will become possible to provide the requested service at some time in the future – give details (which must be as specific as the circumstances reasonably allow) of

when capacity to provide the requested service is likely to become available and, if possible, nominate a specific date.

(5) If the service provider is able to provide the service, it must, within 25 business days of the access request date, provide the terms and conditions on which the service provider is prepared to provide the requested pipeline service (the access proposal).

(6) If the service provider needs to carry out further investigation to determine whether it can provide the requested pipeline service and the prospective user agrees to the reasonable costs specified by the service provider under subrule 3(b)(ii), it must carry out the investigation and then, within 25 business days of the access request date, inform the prospective user:

(a) that it is able to provide the requested service; or

(b) that it is unable to provide the requested service.

(7) If the service provider is unable to provide the requested pipeline service it must include in its notification under subrule (6) the information specified in subrule (4).

(8) If the service provider is able to provide the service, it must, within 15 business days of providing the notice under subrule (6)(a), provide the terms and conditions on which the service provider is prepared to provide the requested pipeline service (the access proposal).

(9) If the prospective user:

(a) wants to seek access to the pipeline service based on the access proposal provided by the service provider under subrules (5) or (8), it must notify the service provider within 15 business days of receiving the access proposal; or

(b) wants to request amendments to the access proposal provided by the service provider under subrules (5) or (8), it must notify the service provider within 15 business days of receiving the access proposal and provide its requested amendments.

(10) Following the prospective user's response under subrule (9)(b), the service provider must respond within 15 business days. If the parties have not agreed on the service provider's proposal (or some negotiated modification of it) within a further 20 business days after the date of the service provider's response under this subrule, then the service provider is taken to have rejected the prospective user's request.

(11) The timeframes specified in subrules (5) to (11) may be extended if the relevant service provider and prospective user agree in writing.

848. In addition to requirements for access, modified rule 48(1)(f) and rule 103(1) of the NGR require the GGP access arrangement to set out queuing requirements.[298]

849. Rule 103 of the NGR details the specific provisions for queuing requirements:

103 Queuing requirements

(1) An access arrangement must contain queuing requirements if:

(a) the access arrangement is for a transmission pipeline; or

[298] Under transitional provisions, modified rule 48(1)(f), as set out in schedule 1 (rule 62) of the NGR, applies to the access arrangement for the GGP. This modified rule is the same as rule 48(1)(e) of the NGR except for its numbering.

(b) the access arrangement is for a distribution pipeline and the [ERA] notifies the service provider that the access arrangement must contain queuing requirements.

(2) If the [ERA] gives a notification under subrule (1), the access arrangement must contain queuing requirements as from the commencement of the first access arrangement period to commence after the date of the notification (but this requirement lapses if the [ERA], by notice to the service provider, withdraws the notification).

(3) Queuing requirements must establish a process or mechanism (or both) for establishing an order of priority between prospective users of spare or developable capacity (or both) in which all prospective users (whether associates of, or unrelated to, the service provider) are treated on a fair and equal basis.

(4) Queuing requirements might (for example) provide that the order of priority is to be determined:

(a) on a first-come-first-served basis; or

(b) on the basis of a publicly notified auction in which all prospective users of the relevant spare capacity or developable capacity are able to participate.

(5) Queuing requirements must be sufficiently detailed to enable prospective users:

(a) to understand the basis on which an order of priority between them has been, or will be, determined; and

(b) if an order of priority has been determined – to determine the prospective user's position in the queue.

GGT's initial proposal

850. Section 5 of GGT's initial proposed revised access arrangement contained both the application procedures and queuing requirements applicable when a prospective user seeks access to a pipeline service. GGT proposed several amendments to correct formatting, typographical and grammatical errors. Other amendments were proposed to simplify and clarify drafting. Apart from these amendments, the proposed procedures and requirements for the fourth access arrangement period (AA4) were unchanged from the current (AA3) access arrangement period.

Draft decision

851. The ERA determined that GGT's proposed amendments to the application procedures and queuing requirements did not materially alter the current procedures and requirements. There were also no submissions from interested parties seeking any amendments to the procedures or requirements.

Changed requirements of the NGR for requesting access

852. As stated at paragraph 846, changes to the NGR occurred in March 2019. These changes affected the provisions of rule 112, which cover the requirements for requesting access to pipeline services.[299] The new provisions of rule 112 require:

- GGT to acknowledge receipt of the prospective user's access request within five business days of receiving it (otherwise referred to as the "access request date").

[299] The requirements for queuing in rule 103 remain unchanged.

- GGT to inform the prospective user, within 10 business days of the access request date, that it: (i) can provide the requested service, (ii) needs to carry out further investigation to determine whether it can provide the requested service, or (iii) it cannot provide the requested service.
- Where GGT cannot provide the requested service, GGT must provide the user with written reasons as to why and, if there is some prospect of being able to provide the requested service in the future, indicate when this is likely.
- Where GGT can provide the requested service, GGT must, within 25 business days of the access request date, provide the terms and conditions on which it is prepared to provide the requested service.
- Where GGT needs to carry out further investigation to determine whether it can provide the requested service, GGT must carry out the investigation and, within 25 business days of the access request date, inform the user that it can or cannot provide the requested service.
  - Where it cannot provide the service, GGT must include reasons as to why and whether there is any prospect of being able to provide the service in the future.
  - Where it can provide the service, GGT must, within 15 business days of giving notice of this, provide the terms and conditions on which it is prepared to provide the service.

853. The new provisions of rule 112 also establish requirements and timeframes on the user once it receives an access proposal for the requested pipeline service from GGT.

- The user must notify GGT whether it wants to seek access to the service in GGT's access proposal within 15 business days of receiving an access proposal for the requested service.
- The user may otherwise request (and propose) amendments to the access proposal within 15 business days of receiving it. GGT must then respond to the user's request for amendments within 15 business days.

854. While rule 112 prescribes the timeframes in which certain procedures need to be completed, these timeframes may be extended if GGT and the prospective user agree to this in writing.

855. As the changes to the NGR occurred after GGT's initial submission to the ERA, the ERA asked for and allowed GGT to provide additional information to clarify, substantiate and/or amend its proposal for requesting access to pipeline services in the access arrangement for AA4.

856. In response to the ERA's request, GGT advised that the scheme for gaining access to the GGP (as set out in section 5 of the proposed revised access arrangement) relied on a spare capacity register, which was established and maintained in accordance with the requirements of rule 111 of the NGR.[300] The March 2019 changes to the NGR deleted this rule. GGT's proposed further amendments to section 5 of the access arrangement were based on the new requirements of rule 112 and the deletion of rule 111 from the NGR.

[300] GGT, *'GGP Access Arrangement Revision: ERA Information Requests 2, 3, 4 and 5'* [email], 30 May 2019.

857. GGT's proposed further amendments are detailed in Appendix 5 of this decision and include:

- A new section 5.1 to provide an overview of the procedures to be followed when requesting access to pipeline services, with separate procedures for requesting services that are and are not provided by spare capacity or developable capacity.[301]
- A new section 5.2 to outline the procedures for requesting access to services not provided by spare capacity or developable capacity.
- Amendments to the current AA3 procedures for registrations of interest for services to be provided by spare capacity or developable capacity.
- Amendments to the current AA3 procedures for requesting access to services provided by spare capacity, with separate procedures depending on whether there is a spare capacity open season and auction.[302]
- Amendments to the current AA3 procedures for determining whether developable capacity is available and the procedures to be followed when it has been determined that capacity can be made available with investment in developable capacity.

Assessment of GGT's further amendments to address rule changes

858. GGT proposed to further amend the requirements for requesting access to a pipeline service in section 5 of its initial proposed revised access arrangement based on the new requirements of rule 112 of the NGR and the deletion of rule 111. GGT's proposed amendments required a prospective user to submit an access request for any service that GGT can reasonably provide using the GGP. The procedures that must be followed vary depending on whether the access request is for a service to be provided by spare capacity or developable capacity.

- An access request for a service not provided by spare capacity or developable capacity must be made following the procedures set out in section 5.2 of the access arrangement.
- An access request for a service to be provided by spare capacity or developable capacity must be made following the procedures set out in sections 5.3 to 5.6 of the access arrangement.

Procedures set out in section 5.2 of the proposed revised access arrangement

859. Section 5.2 of the access arrangement is a new section proposed by GGT to meet the requirements of rule 112 of the NGR. The ERA considered that GGT's proposed procedures within section 5.2 met the requirements of rule 112. However, GGT's proposed meaning of access request date differed from the NGR:

- GGT specified the access request date to be the date that the prospective user's written access request was dated (section 5.2(a) of the access arrangement).

301 The National Gas Law (section 2) defines "**spare capacity**" to mean "[the] unutilised capacity of a pipeline" and "**developable capacity**" to mean "the difference between the current capacity of a covered pipeline and the capacity of a covered pipeline which would be available if a new facility was constructed, but does not include any new capacity of a covered pipeline resulting from an extension to the geographic range of a covered pipeline".

302 Under the access arrangement, GGT may elect not to conduct an open season and auction where the spare capacity available is, or is likely to be, less than two terajoules per day (2 TJ/d).

- The NGR specified the access request date to be "the date that the prospective user's access request is received by the service provider" (rule 112(1)).

860. The ERA considered that the effect of this difference in meaning was unlikely to be significant in circumstances where the access request was prepared, dated and sent electronically (by email). However, the use of postal mail could disadvantage GGT and its ability to meet its obligations to acknowledge receipt of the access request within five business days after the access request date as specified by GGT. For this reason, the ERA considered that GGT should amend the meaning of access request date in its further proposal to be the same as the NGR (rule 112(1)).

Procedures set out in sections 5.3 to 5.6 of the proposed revised access arrangement

861. GGT proposed to amend sections 5.3 to 5.6 of the access arrangement following the deletion of rule 111 from the NGR. As indicated by GGT, the current AA3 procedures for gaining access to the GGP used a spare capacity register that was established and maintained under the requirements of rule 111 of the NGR. While the requirements for such a register no longer exist, GGT proposed to retain a spare capacity register in the access arrangement (for AA4) with the following amendments:

- The provisions for the registration of interest (section 5.3 of the access arrangement) were amended:
  - To clarify that a request is an "access request".
  - To introduce timeframes and information requirements for GGT when responding to registrations of interest from prospective users.
- The provisions for spare capacity (sections 5.4 and 5.5 of the access arrangement) were amended:
  - To create separate procedures for when the volume of spare capacity was, or was likely to be, less than 2 terajoules per day (TJ/d). In these circumstances, GGT may elect not to run a spare capacity open season and auction for that spare capacity.
    - Where spare capacity is less than 2 TJ/d, the procedures to be followed are outlined in section 5.4 of the access arrangement. These procedures are generally consistent with the procedures outlined in section 5.2 of the access arrangement (which meet the requirements of rule 112 of the NGR).
    - Where spare capacity is more than 2 TJ/d, GGT will run an open season and auction for that spare capacity in accordance with the procedures set out in section 5.5 of the access arrangement. These procedures were amended to be consistent with the process, timeframes and information requirements of rule 112 of the NGR.
- The provisions for developable capacity (section 5.6 of the access arrangement) were amended:
  - To clarify what information must be provided by either GGT or the prospective user and the timeframe to do so.
  - To introduce new provisions to establish procedures for when GGT needs to carry out an investigation and prospective users agree to meet the reasonable costs of the investigation. These procedures were generally consistent with the procedures outlined in section 5.2 of the access arrangement (which met the requirements of rule 112 of the NGR).

862. While there was no longer a requirement for a spare capacity register, the ERA considered GGT's proposal to amend and retain the provisions for a register supported the national gas objective. Furthermore, GGT's proposed amendments to the existing sections of the access arrangement covered (and met) the queuing requirements set out in rule 103 of the NGR and were generally consistent with the procedures for requesting access in rule 112 of the NGR.

863. Subject to amending the meaning of access request date and any submissions from interested parties in response to the draft decision on GGT's further (May 2019) proposed amendments, the ERA considered that GGT's amended proposal for application procedures and queuing requirements was consistent with the national gas objective and met the (new) requirements of rule 112 of the NGR.[303]

> **Draft Decision Required Amendment 12**
>
> GGT must incorporate the proposed changes to section 5 (Queuing) of the access arrangement as detailed in Appendix 5 of [the] draft decision. [Appendix 5 of this final decision]

GGT's response to the draft decision

864. GGT accepted the ERA's draft decision required amendment 12 and incorporated the proposed changes (that were submitted to the ERA in May 2019) to section 5 of the access arrangement.[304]

Final decision

865. GGT's revised proposal incorporated the proposed amendments it submitted in May 2019 to address the changes to the NGR (GGT's proposed amendments are detailed in Appendix 5 of this decision). There were no submissions from interested parties on the amended application procedures and queuing requirements.

866. However, GGT did not amend the meaning of access request date in section 5.2(a) of the proposed revised access arrangement. The access request date remained the date that the prospective user's written access request was dated, instead of the date that the prospective user's access request was received by the service provider as specified in rule 112(1) of the NGR.

867. As indicated in the draft decision, the effect of this difference in meaning is unlikely to be significant in circumstances where the access request is prepared, dated and sent electronically (by email). However, in circumstances where postal mail is used, GGT may find it difficult to meet its obligations to acknowledge receipt of an access request within five business days after the access request date as specified by GGT. However, as submitted by GGT the use of email has largely replaced postal mail and facsimile communications (see paragraph 823). Therefore, the circumstances where postal mail is used are likely to be infrequent.

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303 The ERA also noted that some further administrative amendments may be required to correct typographical and referencing errors (for example, section 5.4(j) is missing the word "section"; section 5.5.2 retains a reference to "Gas Days" while other references have been amended to "Business Day"; and section 5.5.4(b) has the words "New Present Value" rather than "Net Present Value").

304 GGT, 11 September 2019, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission*, p. 11.

868. The ERA has confirmed with GGT that in accepting draft decision required amendment 12, GGT had also accepted the ERA's considerations on the meaning of "access request date". However, GGT had inadvertently left the meaning of this term unchanged in its revised proposal. GGT submitted:[305]

> GGT's intention, when responding to Required Amendment 12 of the Draft Decision, was to accept the ERA's draft decision position that the meaning of "access request date" in the revised proposed Access Arrangement should be as in rule 112(1) of the National Gas Rules. That is, GGT intended that "access request date" be the date on which the prospective user's access request is received by the service provider.
>
> Acceptance of the definition in rule 112(1) requires the following amendments to the Proposed Revised Access Arrangement for the GGP, as amended in response to the ERA Draft Decision:
>
> Section 5.2
>
> (a) An access request for a Service not provided by Spare Capacity or Developable Capacity must be made in writing~~, be dated (the date being the access request date),~~ and must: …
>
> Section 5.4
>
> (c) An access request for any a Service provided by Spare Capacity must be made in writing~~, be dated (the access request date),~~ and must: … *[sic]*
>
> For the avoidance of doubt, new sections 5.2(b) and 5.4(d) should be added to the Proposed Revised Access Arrangement. These new sections would have the same wording:
>
> Section 5.2(b)
>
> The **access request date** is the date on which the Prospective User's access request is received by Service Provider.
>
> Section 5.4(d)
>
> The **access request date** is the date on which the Prospective User's access request is received by Service Provider.
>
> Sections 5.5.1 and 5.5.2 also use the term "access request date". In section 5.5.2, the date for lodgement of a bid for spare capacity is, in effect, the date on which the access request is received, and no change is required to accord with the access request date being the date on which the prospective user's access request is received by the service provider. Section 5.5.1 should be modified as follows to better accord with GGT's intention to accept the definition in rule 112(1):
>
> Section 5.5.1
>
> (a) Where all Expressions of Interest for Services to be provided by Spare Capacity can be met with the available Spare Capacity, Service Provider will treat each Expression of Interest as an access request ~~with Access Request Date~~ received on the date 30 Business Days after the date that the Spare Capacity Notice is published in a national daily newspaper (the date 30 business Days after the date of publication of the Spare Capacity Notice being the access request date).

869. The ERA considers that the meaning of "access request date" in the access arrangement for the GGP should be consistent with the meaning given to that term in the NGR. GGT's further proposed amendments (in response to the ERA's query

[305] GGT, *'GGP – GGT – AA4 – Information Request ERA 8 – Access Request Date'* [email], 19 November 2019.

about the meaning of the term) addresses this matter – that is, GGT's further proposed amendments make the meaning of "access request date" in the access arrangement consistent with the meaning given to that term in the NGR.

870. Subject to amending the meaning of "access request date" consistent with GGT's further proposed amendments and some further minor amendments,[306] the ERA maintains the position in its draft decision that GGT's revised proposal for application procedures and queuing requirements is consistent with the national gas objective and meets the (new) requirements of rule 112 of the NGR.

Required Amendment 11

Sections 5.2(a) and 5.4(c) of the access arrangement must be amended to read:

- Section 5.2(a): "An access request for a Service not provided by Spare Capacity or Developable Capacity must be made in writing and must: …"
- Section 5.4(c): "An access request for any Service provided by Spare Capacity must be made in writing and must: …"

New sections (5.2(aa) and 5.4(ca)) must be inserted into the access arrangement after sections 5.2(a) and 5.4(c) respectively, and read: "The **access request date** is the date on which the Prospective User's access request is received by Service Provider."

Section 5.5.1(a) of the access arrangement must be amended to read: "Where all Expressions of Interest for Services to be provided by Spare Capacity can be met with the available Spare Capacity, Service Provider will treat each Expression of Interest as an access request received on the date 30 Business Days after the date that the Spare Capacity Notice is published in a national daily newspaper (the date 30 Business Days after the date of publication of the Spare Capacity Notice being the **access request date**)."

Minor amendments to sections 5.3.2(a)(iv), 5.4(j); 5.5(a)(i), 5.5.1(b), 5.5.2(b), 5.5.4(b), 5.6.1(b)(i), 5.6.1(b)(ii), 5.6.1(c) and 5.6.1(d) of the access arrangement (as detailed in footnote 306 of this final decision) must be made to correct errors and make the access arrangement consistent with GGT's proposed revised amendments submitted in May 2019 (and detailed in Appendix 5 of this final decision).

Capacity trading requirements

871. Modified rule 48(1)(g) of the NGR requires the GGP access arrangement to set out capacity trading requirements.[307]

306 The following minor amendments must be made to the proposed revised access arrangement to correct typographical and/or referencing errors: in section 5.4(j) the reference to "section 0" amended to read "section 5.4"; in section 5.5.2(b) the reference to "30 Gas Days" amended to read "30 Business Days"; and in section 5.5.4(b) the reference to "New Present Value" amended to read "Net Present Value".

Further minor amendments to sections 5.3.2(a)(iv); 5.5(a)(i); 5.5.1(b); 5.6.1(b)(i); 5.6.1(b)(ii); 5.6.1(c) and 5.6.1(d) of the proposed revised access arrangement must also be made to make it consistent with GGT's proposed amendments submitted in May 2019 (and detailed in Appendix 5 of this final decision).

307 Under transitional provisions, modified rule 48(1)(g), as set out in Schedule 1 (rule 62) of the NGR, applies to the access arrangement for the GGP. This modified rule is the same as rule 48(1)(f) of the NGR except for its numbering.

872. As outlined at paragraph 35, changes to the NGR occurred in March 2019. However, these changes did not affect the requirements for capacity trading. Rule 105 of the NGR details the capacity trading requirements.

> **105 Capacity trading requirements**
>
> (1) Capacity trading requirements must provide for transfer of capacity:
>
> (a) if the service provider is registered as a participant in a particular gas market – in accordance with rules or Procedures governing the relevant gas market; or
>
> (b) if the service provider is not so registered, or the relevant rules or Procedures do not deal with capacity trading – in accordance with this rule.
>
> (2) A user may, without the service provider's consent, transfer, by way of subcontract, all or any of the user's contracted capacity to another (the third party) with the following consequences:
>
> (a) the transferor's rights against, and obligations to, the service provider are (subject to paragraph (b)) unaffected by the transfer; but
>
> (b) the transferor must immediately give notice to the service provider of:
>
> (i) the subcontract and its likely duration; and
>
> (ii) the identity of the third party; and
>
> (iii) the amount of the contracted capacity transferred.
>
> (3) A user may, with the service provider's consent, transfer all or any of the user's contracted capacity to another (the third party) with the following consequences:
>
> (a) the transferor's rights against, and obligations to, the service provider are terminated or modified in accordance with the capacity trading requirements; and
>
> (b) a contract arises between the service provider and the third party on terms and conditions determined by or in accordance with the capacity trading requirements.
>
> (4) The service provider must not withhold its consent under subrule (3) unless it has reasonable grounds, based on technical or commercial considerations, for doing so.
>
> (5) An adjustment of rights and liabilities under subrule (3) does not affect rights or liabilities that had accrued under, or in relation to, the contract before the transfer took effect.
>
> (6) The capacity trading requirements may specify in advance conditions under which consent will or will not be given, and conditions to be complied with if consent is given.

GGT's initial proposal

873. Section 6 of GGT's initial proposed revised access arrangement sets out the capacity trading requirements that are applicable for the transfer of contracted capacity. The proposed requirements for AA4 were unchanged from the AA3 requirements.

Draft decision

874. The capacity trading requirements remain unchanged from the current (AA3) requirements. As stated in section 6.1 of the proposed revised access arrangement, transfers of contracted capacity will be undertaken in accordance with rule 105 of the NGR and sections 6.2 (Assignment of contracted capacity by subcontract) and 6.3 (Other assignments) of the access arrangement.

875. There were no submissions from interested parties seeking any amendments to these requirements. In the absence of any other reason to make amendments, the ERA determined that the capacity trading requirements met the requirements of the NGR.

GGT's response to the draft decision

876. GGT did not make any further amendments to the proposed capacity trading requirements in its revised proposal.

Final decision

877. GGT has not proposed any further amendments to the capacity trading requirements. There were no submissions from interested parties on these requirements.

878. The ERA's final decision, consistent with its draft decision, is that the capacity trading requirements are consistent with the national gas objective and meet the requirements of rule 105 of the NGR.

Extension and expansion requirements

879. Modified rule 48(1)(h) of the NGR requires the GGP access arrangement to set out extension and expansion requirements.[308]

880. As outlined at paragraph 35, changes to the NGR occurred in March 2019 (after GGT's access arrangement proposal submission to the ERA). These changes affected rule 104 of the NGR, which details the requirements for extensions and expansions. The new requirements for extensions and expansions apply to this access arrangement review and are reproduced below:

> **104 Extension and expansion requirements**
>
> (1) Extension and expansion requirements may state whether the applicable access arrangement will apply to incremental services to be provided as a result of a particular extension to the pipeline made during the access arrangement period or may allow for later resolution of that question on a basis stated in the requirements.
>
> (2) Extension and expansion requirements may, if the service provider agrees, state that the applicable access arrangement will apply to incremental services to be provided as a result of a particular extension to the pipeline made before the revision commencement date for the applicable access arrangement.

[308] Under transitional provisions, modified rule 48(1)(h), as set out in Schedule 1 (rule 62) of the NGR, applies to the access arrangement for the GGP. This modified rule is the same as rule 48(1)(g) of the NGR except for its numbering.

(3) Extension and expansion requirements must state that the applicable access arrangement will apply to incremental services to be provided as a result of any expansion to the capacity of the pipeline during the access arrangement period and deal with the effect of the expansion on tariffs.

(4) Extension and expansion requirements included in a full access arrangement must, if they provide that an applicable access arrangement is to apply to incremental services provided as a result of an extension to the pipeline:

(a) in the case of extensions made before the revision commencement date for the applicable access arrangement deal with:

(i) the effect of the extension on the opening capital base under rule 77(2)(c1); and

(ii) the effect of the extension on the description of reference services specified in the access arrangement proposal; and

(b) in all cases, deal with the effect of the extension on tariffs.

(5) The extension and expansion requirements cannot require the service provider to provide funds for work involved in making an extension or expansion unless the service provider agrees.

GGT's initial proposal

881. Section 7 of GGT's initial proposed revised access arrangement sets out the extensions and expansions requirements that are applicable to the access arrangement. The requirements proposed for AA4 remained unchanged from AA3.

Draft decision

882. GGT's proposed extensions and expansions requirements remained unchanged from the current (AA3) requirements. There were no submissions from interested parties seeking any amendments to these requirements.

Changed requirements of the NGR for pipeline and reference services

883. As stated at paragraph 879, changes to the NGR occurred in March 2019. These changes affected the requirements for extensions and expansions (rule 104 of the NGR). Under the new extension and expansion requirements GGT:

- May state whether the access arrangement will apply to incremental services to be provided as a result of a particular extension to the pipeline made during the access arrangement period or allow for a later resolution of that question on a basis as stated in the requirements.
- May state, if GGT's agrees, that the access arrangement will apply to incremental services to be provided as a result of a particular extension to the pipeline made before the revision commencement date for the access arrangement.
- Must state that the access arrangement will apply to incremental services to be provided as a result of any expansion to the capacity of the pipeline during the access arrangement period and deal with the effect of the expansion on tariffs.

884. If the extension and expansion requirements provide that the access arrangement is to apply to incremental services provided as a result of an extension to the pipeline:

- In the case of extensions made before the revision commencement date for the access arrangement, the requirements must deal with the effect of the extension on the opening capital base (under rule 77(2)(c1) of the NGR, as well as the

effect of the extension on the description of reference services specified in the access arrangement proposal.

- In all cases, the requirements must deal with the effect of the extension on tariffs.

885. The extension and expansion requirements cannot require GGT to provide funds for work involved in making an extension or expansion unless GGT agrees.

886. As the changes to the NGR occurred after GGT's submission to the ERA, the ERA asked for and allowed GGT to provide additional information to clarify, substantiate and/or amend its proposal for extension and expansion requirements in the access arrangement for AA4.

887. In response to the ERA's request, GGT proposed further amendments to section 7 of the proposed revised access arrangement to redraft:[309]

- Section 7.2(b) of the access arrangement (treatment of expansions) to align with the new wording of rule 104(3) of the NGR which requires that the access arrangement will apply to all expansions to the capacity of the pipeline during the access arrangement period.
- Section 7.3 of the access arrangement (treatment of extensions/expansions on tariffs) to remove references to "the service provider and the owners" because there are four service providers for the GGP (as detailed in section 1.4 of the access arrangement), with GGT being the complying service provider, and the other three service providers being the owners of the GGP.[310]

888. GGT's further amendments are detailed in Appendix 6 of this decision.

Assessment of GGT's further proposed amendments to address rule changes

889. GGT proposed to amend the extension and expansion requirements in section 7 of the proposed revised access arrangement to align them with the new requirements of rule 104 of the NGR.

890. For extensions, GGT proposed to retain the requirement for it to apply to the ERA for a decision on whether a proposed extension will be taken to form part of the covered pipeline so that the access arrangement applies to incremental services provided by means of the extension. GGT must make the application when the extension is first considered and prior to making a final investment decision.

891. For expansions, GGT amended section 7.2(b) of the proposed revised access arrangement to state that, if there was an expansion during the access arrangement period, the access arrangement would apply to the incremental services provided after the expansion came into operation. This is consistent with the requirements of rule 104(3) of the NGR, which requires all expansions to the capacity of the pipeline during the access arrangement period to be covered by the access arrangement.

892. Section 7.3 of the proposed revised access arrangement deals with the effect of extensions and expansions on tariffs. GGT proposed further amendments to this section to remove references to the service provider and the owners. There are four service providers for the GGP. GGT controls and operates the GGP and is the

309 GGT, 30 May 2019, *'GGP Access Arrangement Revision: ERA Information Requests 2, 3, 4 and 5'* [email].

310 In its response, GGT has referred to "section 7.4". However, the proposed amendments have been made to "section 7.3" of the access arrangement.

complying service provider for the pipeline. The other three service providers are the owners of the GGP.[311] The ERA determined that GGT's proposal to only refer to the service provider (and not service provider and owners) simplified the drafting and reflected the information in section 1.4 (Service Providers) of the access arrangement.

893. In the draft decision, the ERA concluded that GGT's proposal to deal with the effect of extension and expansions on tariffs met the requirements of rule 104(4) of the NGR:

- GGT did not state that the access arrangement would apply to incremental services provided by means of an extension made before the revision commencement date for the applicable access arrangement (being 1 January 2020 for the current access arrangement).[312] Hence, rule 104(4)(a) of the NGR does not apply and the access arrangement does not need to deal with the effect of the extension:
  - on the opening capital base (under rule 77(2)(c1) of the NGR)
  - on the description of reference services.
- GGT stated (in section 7.3 of the proposed revised access arrangement) that it would deal with the effect of extensions/expansions, which remained substantially unchanged from the current (AA3) access arrangement, in the following way:
  - There will be no change to the reference tariff applied to a user when the extension (or expansion) has been fully funded by that user's capital contribution, except to contribute to GGT's operating costs in connection with the extension (or expansion).
  - Any change to reference tariffs may only occur pursuant to the processes set out in Part 8 of the NGR.
  - Users of incremental services, who have not made a capital contribution to the investment needed to provide the services that they use, and which have been funded by others, may be liable to pay a surcharge (as provided for under rule 83 of the NGR).
  - Extensions (or expansions) funded by GGT may result in a surcharge on users, subject to GGT providing written notice to the ERA and the ERA approving this notice in accordance with rule 83 of the NGR.

894. Consistent with rule 104(5) of the NGR, section 7.1 of the proposed revised access arrangement stated that GGT "will not be required to provide funds for work involved in making an extension or expansion unless [GGT] agrees to do so".

895. Subject to any submissions from interested parties in response to the draft decision on GGT's further (May 2019) proposed amendments, the ERA considered that GGT's amended proposal for extension and expansion requirements was consistent with the national gas objective and met the (new) requirements of the NGR.

311 Southern Cross Pipelines Australia Pty Limited, Southern Cross Pipelines (NPL) Australia Pty Ltd and Alinta Energy GGT Pty Ltd.

312 As provided for under rule 104(2) of the NGR.

Draft Decision Required Amendment 13

GGT must incorporate the proposed changes to section 7 (Extension and Expansion) of the access arrangement as detailed in Appendix 6 of [the] draft decision. [Appendix 6 of this final decision]

GGT's response to the draft decision

896. GGT accepted the ERA's draft decision required amendment 13 and incorporated the proposed changes that were submitted to the ERA in May 2019 to section 7 of the access arrangement.[313]

Final decision

897. Except for some minor amendments,[314] GGT's revised proposal incorporates the proposed amendments that were submitted by GGT in May 2019 to address the changes to the NGR (GGT's proposed amendments are detailed in Appendix 6 of this final decision). There were no submissions from interested parties on the amended extension and expansion requirements.

898. The ERA's final decision, consistent with its draft decision, is that GGT's revised proposal for extension and expansion requirements is consistent with the national gas objective and meets the new requirements of rule 104 of the NGR.

Required Amendment 12

Minor amendments to sections 7.3(a) and 7.3(a)(iii) of the access arrangement (as detailed in footnote 314 of this final decision) must be made to make the access arrangement consistent with GGT's proposed revised amendments submitted in May 2019 (and detailed in Appendix 6 of this final decision).

Receipt and delivery points

899. Modified rule 48(1)(i) of the NGR requires the GGP access arrangement to state the terms and conditions for changing receipt and delivery points.[315]

900. As outlined at paragraph 35, changes to the NGR occurred in March 2019. However, these changes did not affect the requirements for changing receipt and delivery points. Rule 106 of the NGR details the provisions for changing receipt or delivery points and is reproduced below:

> **106 Change of receipt or delivery point by user**
>
> (1) An access arrangement must provide for the change of a receipt or delivery point in accordance with the following principles:

313 GGT, 11 September 2019, *Access Arrangement Revision Proposal Response to ERA Draft Decision Submission*, p. 11.

314 The following amendments must be made to the proposed revised access arrangement to make it consistent with GGT's proposed amendments submitted in May 2019 (and detailed in Appendix 6 of this final decision): in section 7.3(a) the reference to "Service Provider's operating costs" amended to read "Service Provider operating costs"; and in section 7.3(a)(ii) the reference to "the Service Provider or any" amended to read "Service Provider or any".

315 Under transitional provisions, modified rule 48(1)(i), as set out in schedule 1 (rule 62) of the NGR, applies to the access arrangement for the GGP. This modified rule is the same as rule 48(1)(h) of the NGR except for its numbering.

(a) a user may, with the service provider's consent, change the user's receipt or delivery point;

(b) the service provider must not withhold its consent unless it has reasonable grounds, based on technical or commercial considerations, for doing so.

(2) The access arrangement may specify in advance conditions under which consent will or will not be given, and conditions to be complied with if consent is given.

GGT's initial proposal

901. Section 6.4 of GGT's initial proposed revised access arrangement and clause D.6 of the proposed terms and conditions applying to the Firm Service detail the terms and conditions for changing receipt and delivery points.[316] The terms and conditions proposed for AA4 remain unchanged from the terms and conditions for AA3.

Draft decision

902. The terms and conditions for changing receipt and delivery points remain unchanged from the current terms and conditions. There were no submissions from interested parties seeking any amendments to these terms and conditions. In the absence of any other reason to make amendments, the ERA determined that the terms and conditions met the requirements of the NGR.

GGT's response to the draft decision

903. GGT did not make any further amendments to the proposed terms and conditions for changing receipt and delivery points in its revised proposal.

Final decision

904. GGT has not proposed any further amendments to the terms and conditions for changing receipt and delivery points. There were no submissions from interested parties on these terms and conditions.

905. The ERA's final decision, consistent with its draft decision, is that the terms and conditions for changing receipt and delivery points is consistent with the national gas objective and meets the requirements of rule 106 of the NGR.

316 Schedule D of the access arrangement.

Appendix 1 List of Tables

Appendix 2 List of Figures

Appendix 3 Abbreviations

AA3	Third Access Arrangement Period
AA4	Fourth Access Arrangement Period
AAI	Access Arrangement Information
AEMC	Australian Energy Market Commission
CAM	Cost Allocation Method
GGP	Goldfields Gas Pipeline
GGT	Gas Transmission Pty Ltd
MEJ	Major Expenditure Jobs
NGL	National Gas Law
NGR	National Gas Rules
TAB	Tax Asset Base
TJ/d	Terajoule per day
WACC	Weighted Average Cost of Capital

Appendix 4 Pipeline and Reference Services

Given the changes to the National Gas Rules that occurred after GGT's initial (December 2018) submission to the ERA, the ERA asked for and allowed GGT to provide additional information to clarify, substantiate and/or amend its access arrangement proposal to specify only one reference service.

GGT's further (May 2019) proposed amendments to section 2.1 of the access arrangement to address the new requirements of modified rule 48[317] are reproduced below.[318]

2 Pipeline Services

2.1 Services under Access Arrangement

Service Provider may provide the following Services on the Covered Pipeline:

(a) Firm Service;

(b) Interruptible Service;

(c) Firm parking service:

(i) a service whereby Gas received from a User, at a Receipt Point, on a day, is stored in the GGP up to an amount not exceeding the parking allowance specified in the User's Transportation Agreement, without interruption or curtailment, except in the specific and limited circumstances set out in the User's Transportation Agreement; and

(ii) User can withdraw Gas which it has stored in the Covered Pipeline by nominating, and having scheduled, transportation to a Delivery Point, without making a corresponding Receipt Point nomination, in accordance with the terms of a transportation service specified in the User's Transportation Agreement;

(d) Firm loan service:

(i) a service whereby Gas is delivered to a User, at a Receipt Point, on a day, up to a quantity not exceeding the loan allowance specified in the User's Transportation Agreement, without interruption or curtailment, except in the specific and limited circumstances set out in the User's Transportation Agreement; and

(ii) User can withdraw Gas which it has stored in the Covered Pipeline by nominating, and having scheduled, transportation to a Delivery Point, without making a corresponding receipt point nomination, in accordance with the terms specified in the User's Transportation Agreement;

(e) Interruptible parking service:

(i) a service whereby Gas received from a User is stored in the Covered Pipeline, on a day, up to a quantity not exceeding the interruptible

317 As set out in schedule 1 (rule 62) of the NGR.

318 GGT, *'GGP Access Arrangement revision: ERA Information Requests 2, 3, 4 and 5'*, [email] 30 May 2019.

parking allowance specified in the User's Transportation Agreement; and

(ii) User nominates a quantity of Gas for storage on the day, and that quantity is scheduled subject to pipeline capacity being available, and subject to any interruption or curtailment of capacity in the Covered Pipeline;

(f) Interruptible loan service:

(i) a service whereby Gas is delivered from the Covered Pipeline, to a User, at a Receipt Point, on a day, up to a quantity not exceeding the interruptible loan allowance specified in the User's Transportation Agreement; and

(ii) User nominates a quantity of Gas for delivery on a day, and that quantity is scheduled subject to pipeline capacity and Line Pack being available, and subject to any interruption or curtailment of capacity in the Covered Pipeline;

(g) In-pipe trade service: a service whereby a Transportation Agreement recognises the User's delivery of Gas, on a day, to a notional point (in-pipe delivery point) in the Covered Pipeline, and receipt of that gas, at a notional point (in-pipe receipt point) in the Covered Pipeline, is recognised in a second User's Transportation Agreement, thereby facilitating the trade of gas between Covered Pipeline Users; and

(h) Interconnection service: a service providing, or facilitating, pipeline interconnection.

Service Provider offers Firm Service, as described in section 2.2, as a Reference Service.

Other services which Service Provider may provide are non-Reference Services, and are offered as Negotiated Services, as described in section 2.3.

~~Service Provider offers the following Services on the Covered Pipeline under this Access Arrangement:~~

~~(a) Firm Service – Reference Service, as described in section 2.2;~~

~~(b) Negotiated Service – non-Reference Service, as described in section 2.3.~~

Appendix 5 Application Procedures and Queuing Requirements

Given the changes to the National Gas Rules that occurred after GGT's initial (December 2018) submission to the ERA, the ERA asked for and allowed GGT to provide additional information to clarify, substantiate and/or amend its access arrangement proposal for requesting access to pipeline services.

GGT's further (May 2019) proposed amendments to section 5 of the access arrangement to address the new requirements of rule 112 are reproduced below.[319]

5 Queuing

5.1 Access request

(a) A Prospective User must submit an access request for access to any Service which Service Provider can reasonably provide using the Covered Pipeline.

(b) An access request for a Service not provided by Spare Capacity or Developable Capacity must be made in the way set out in section 5.2 below.

(c) An access request for a Service to be provided by Spare Capacity or Developable Capacity must be made in the way set out in sections 5.3 to 5.6 below.

5.2 Access request for a Service not provided by Spare Capacity or Developable Capacity

(a) An access request for a Service not provided by Spare Capacity or Developable Capacity must be made in writing, be dated (the date being the **access request date**), and must:

(i) specify the Service and state the time or times when the Service will be required;

(ii) identify the Receipt Point at where the Prospective User proposes that Gas be received into the Covered Pipeline or any Delivery Point at which the Prospective User proposes that Gas be delivered from the Covered Pipeline;

(iii) state the relevant technical details (including Gas specification) for connection to the Covered Pipeline, and for ensuring the safety and reliability of gas supply into, or Gas supply from, the Covered Pipeline.

(b) On receipt of an access request for a Service not provided by Spare Capacity or Developable Capacity, Service Provider must:

(i) acknowledge receipt of the access request within 5 Business Days after the access request date;

(ii) inform the Prospective User, within 10 Business Days after the access request date, that:

[319] GGT, *'GGP Access Arrangement revision: ERA Information Requests 2, 3, 4 and 5'*, [email] 30 May 2019.

(A) Service Provider is able to provide the Service; or

(B) Service Provider is unable to provide the Service, in which case the Service Provider must:

a) provide the prospective user with written reasons explaining why the Service cannot be provided; and

b) if the Service may be provided at some time in the future, give details (to the extent circumstances reasonably allow) of when the Service is likely to become available; or

(C) Service Provider needs to carry out an investigation to determine whether the Service can be provided, in which case Service Provider must provide a statement of the nature of the investigation, and the reasonable costs of the investigation that the Prospective User would be required to meet.

(c) If Service Provider is able to provide the Service, Service Provider must, within 25 Business Days of the access request date, provide the Prospective User with the terms and conditions on which the Service Provider is prepared to provide the Service (the access proposal).

(d) If Service Provider needs to carry out an investigation to determine whether the Service can be provided, and the Prospective User agrees to meet the reasonable costs, Service Provider must carry out the investigation and, within 25 Business Days of the access request date, inform the Prospective User that:

(i) Service Provider is able to provide the Service; or

(ii) Service Provider is unable to provide the Service, in which case the Service Provider must:

(A) provide the Prospective User with written reasons explaining why the Service cannot be provided; and

(B) if the Service may be provided at some time in the future, give details (to the extent circumstances reasonably allow) of when the Service is likely to become available.

(e) If, after carrying out an investigation, Service Provider informs the Prospective User that the Service is able to be provided, Service Provider must, within 15 days of informing the Prospective User, provide the Prospective User with the terms and conditions on which the Service Provider is prepared to provide the Service (the **access proposal**).

(f) If Prospective User intends to access the Service based on the access proposal provided by the Service Provider under (c) or (e) above, then the Prospective User must notify the Service Provider of its intention within 15 Business Days of receiving the access proposal.

(g) If the Prospective User wants to request amendments to the access proposal provided by Service Provider under (c) or (e) above, the Prospective User must provide Service Provider with requested amendments within 15 Business Days of receiving the access proposal.

(h) Service Provider must respond to the Prospective User's requested amendments to the access proposal within 15 Business Days.

(i) If the parties have not agreed on the access proposal, or some negotiated modification of it, within a further 20 Business Days of Service Provider's response under (h), then Service Provider is taken to have rejected the Prospective User's access request.

(j) Service Provider and the Prospective User may extend the periods specified in this section 5.2 by written agreement.

5.3~~5.1~~ Registration of interest

5.3.1~~5.1.1~~ Registration of interest for Services to be provided by Spare Capacity or Developable Capacity

(a) Prospective Users may lodge with Service Provider a registration of interest for Services to be provided by Spare Capacity and/or Developable Capacity. A registration of interest must be made in the form set out in Schedule B.

(b) A registration of interest is valid for 12 months from receipt of the registration of interest by Service Provider.

(c) A Prospective User may submit a revised registration of interest at any time and the registration of interest as revised will be valid for a period of 12 months.

(d) The order of receipt of registrations of interest does not determine and is not relevant to the priority of any access request.

5.3.2~~5.1.2~~ Service Provider to respond to registrations of interest

(a) Within 20 Business Days of receipt of a registration of interest pursuant to section 5.3.1~~5.1.1~~, Service Provider must:

(i) notify the Prospective User that the registration of interest has been received and the date of its receipt;

(ii) subject to section 5.3.2~~5.1.2~~ (a)(iii), advise the Prospective User of any existing Spare Capacity, or if no Spare Capacity is currently available, why Spare Capacity is not available, and the Service Provider's estimate of when the capacity sought may become available;

(iii) if Service Provider determines that an investigation~~s are~~is required to determine whether Spare Capacity may be available, Service Provider must provide the Prospective User with a proposal for carrying out ~~further~~the investigation~~s~~ within 10 Business Days of receiving the registration of interest, and must provide a statement of the nature of the investigation, and the reasonable costs of the investigation that the Prospective User would be required to meet~~in accordance with Rule 112(3)(b) of the NGR~~;

(iv) if ~~a~~the Prospective User wishes Service Provider to ~~conduct~~carry out an investigation~~s~~ in accordance with Service Provider's proposal under 5.3.2~~5.1.2~~(a)(iii) (or a modified proposal agreed between Service Provider and the Prospective User), it must provide Service

Provider with written acceptance of that proposal ~~in accordance with Rule 112(5) of the NGR~~;

(v) if the registration of interest is for Spare Capacity, advise the Prospective ~~user~~User whether the Service sought may be able to be provided by Developable Capacity and, if there is some prospect that capacity may be developed at some time in the future, give details (to the extent circumstances reasonably allow) of when the Developable Capacity is likely to become available~~any estimate of when that capacity may become available~~; and

(vi) provide details of the other registrations of interest Service Provider has received that are valid (without identifying the Prospective Users who have lodged those registrations of interest), including the capacity sought, whether that capacity is sought in relation to Spare Capacity and/or Developable Capacity, and the ~~time~~ period in which the Services are being sought.

5.3.3~~5.1.3~~ Service Provider to keep registrations of interest for Services under review

Service Provider will keep registrations of interest under review in order to determine whether there is likely to be sufficient demand for Services that could be provided by means of Developable Capacity.

5.4~~5.2~~ Spare Capacity – less than 2TJ/d

~~5.2.1 Spare Capacity~~

~~(a) Service Provider will include all Spare Capacity in the Spare Capacity Register, and will add a note on the Register describing the process for access to Spare Capacity.~~

(a)~~(b)~~ Where the volume of Spare Capacity that is, or is likely to become, available is less than 2 TJ/d, Service Provider may elect not to run an open season and auction for that Spare Capacity~~, and if so, Service Provider must make that Spare Capacity available by placing it on the Spare Capacity Register~~.

(b)~~(c)~~ Service Provider will make that Spare Capacity available on a first come, first served basis to those Prospective Users who make access requests for Services which will use that capacity~~enter into an agreement for that Spare Capacity within 2 months of seeking access to the Spare Capacity and at a rate which is at or above the Reference Tariff and sections 5.2.2 to 5.2.6 will not apply to such of that Spare Capacity as is so taken up~~.

(c) An access request for any a Service provided by Spare Capacity must be made in writing, be dated (the **access request date**), and must:

(i) specify the Service and state the time or times when the Service will be required;

(ii) identify the Receipt Point at where the Prospective User proposes that Gas be received into the Covered Pipeline or any Delivery Point at which the Prospective User proposes that Gas be delivered from the Covered Pipeline;

(iii) state the relevant technical details (including Gas specification) for connection to the Covered Pipeline, and for ensuring the safety and reliability of Gas supply into, or gas supply from, the Covered Pipeline.

(d) On receipt of an access request for a Service provided by Spare Capacity, Service Provider must:

(i) acknowledge receipt of the access request within 5 Business Days after the access request date;

(ii) inform the Prospective User, within 10 Business Days after the access request date, that:

(A) Service Provider is able to provide the Service; or

(B) Service Provider is unable to provide the Service, in which case the Service Provider must:

a) provide the prospective user with written reasons explaining why the Service cannot be provided; and

b) if the Service may be provided at some time in the future, give details (to the extent circumstances reasonably allow) of when the Service is likely to become available.

(e) If Service Provider is able to provide the Service, Service Provider must, within 25 Business Days of the access request date, provide the Prospective User with the terms and conditions on which the Service Provider is prepared to provide the Service (the **access proposal**).

(f) If Prospective User intends to access the Service based on the access proposal provided by the Service Provider under (c) or (e) above, then the Prospective User must notify the Service Provider of its intention within 15 Business Days of receiving the access proposal.

(g) If the Prospective User wants to request amendments to the access proposal provided by Service Provider under (c) or (e) above, the Prospective User must provide Service Provider with requested amendments within 15 Business Days of receiving the access proposal.

(h) Service Provider must respond to the Prospective User's requested amendments to the access proposal within 15 Business Days.

(i) If the parties have not agreed on the access proposal, or some negotiated modification of it, within a further 20 Business Days of Service Provider's response under (h), then Service Provider is taken to have rejected the Prospective User's access request.

(j) Service Provider and the Prospective User may extend the periods specified in this [section] 5.4 by written agreement.

5.5~~5.2.2~~ Spare Capacity – open season

(a) Where Spare Capacity is or is likely to become available Service Provider must:

(i) provide all Prospective Users who have submitted a registration of interest ~~for Capacity~~ with a Spare Capacity Notice; and

(ii) publish in a local and national daily newspaper a copy of the Spare Capacity Notice.

(b) The Spare Capacity Notice must advise that Expressions of Interest for Services to be provided by Spare Capacity are to be received by Service Provider by a date not less than 30 ~~Gas~~Business Days after the date that the Spare Capacity Notice is published in the national daily newspaper.

(c) For the avoidance of doubt, where Service Provider and a User have agreed to enter into a new agreement for a Service that is currently being provided to that User pursuant to an agreement or to otherwise extend the term of the existing agreement, Spare Capacity will not be considered likely to become available merely because a current agreement for Capacity is nearing its end date.

5.5.1 Expressions of Interest met with available Spare Capacity

(a)~~(d)~~ Where all Expressions of Interest for Services to be provided by Spare Capacity can be met with the available Spare Capacity, Service Provider will treat each Expression of Interest as an access request with Access Request Date the date 30 Business Days after the date that the Spare Capacity Notice is published in a national daily newspaper.

(b) Service Provider will enter into negotiations with all Prospective Users that lodge Expressions of Interest~~,~~ for the provision of Services using the available Spare Capacity. Service Provider may deal with complying Expressions of Interest in any order provided that Service Provider uses reasonable endeavours to ensure that no complying Expression of Interest is ultimately disadvantaged as a result.

(c) Service Provider must:

(i) acknowledge receipt of an Expression of Interest within 5 Business Days after the access request date;

(ii) inform the Prospective User, within 10 Business Days after the access request date, that:

(A) Service Provider is able to provide the Service; or

(B) Service Provider is unable to provide the Service, in which case the Service Provider must:

a) provide the prospective user with written reasons explaining why the Service cannot be provided; and

b) if the Service may be provided at some time in the future, give details (to the extent circumstances reasonably allow) of when the Service is likely to become available.

(d) If Service Provider is able to provide the Service, Service Provider must, within 25 Business Days of the access request date, provide the Prospective User with the terms and conditions on which the Service Provider is prepared to provide the Service (the **access proposal**).

(e) If Prospective User intends to access the Service based on the access Proposal provided by the Service Provider under (d) above, then the Prospective User must notify the Service Provider of its intention within 15 Business Days of receiving the access proposal.

(f) If the Prospective User wants to request amendments to the access proposal provided by Service Provider under (d) above, the Prospective User must provide Service Provider with requested amendments within 15 Business Days of receiving the access proposal.

(g) Service Provider must respond to the Prospective User's requested amendments to the access proposal within 15 Business Days.

(h) If the parties have not agreed on the access proposal, or some negotiated modification of it, within a further 20 Business Days of Service Provider's response under (g), then Service Provider is taken to have rejected the Prospective User's access request.

(i) Service Provider and the Prospective User may extend the periods specified in this [section] 5.5.1 by written agreement.

5.5.2~~5.2.3~~ Auction for Spare Capacity

(a) In the event Service Provider determines that there is sufficient demand to proceed with an auction for the Spare Capacity (and that the available Spare Capacity is not sufficient to meet the Expressions of Interest for Services to be provided by Spare Capacity), Service Provider will notify all Prospective Users that lodged Expressions of Interest for Spare Capacity in response to the Spare Capacity Notice that Service Provider will accept bids for Spare Capacity (**Notice of Auction for Spare Capacity**).

(b) The Notice of Auction for Spare Capacity must identify the Capacity that will be the subject of the auction and specify the date by which bids must be lodged. The date for the lodgement of bids must be at least 30 Gas Days after the date of the Notice of Auction for Spare Capacity.

(c) Service Provider may provide the following documents or information together with the Notice of Auction for Spare Capacity:

(i) an auction application registration form;

(ii) the form of financial security required to participate in the auction, which may take the form of a parent company guarantee, bank guarantee or similar security as reasonably determined by Service Provider and in the amount reasonably determined by Service Provider. The form and amount of security required may vary as between Users, with any variation to be reasonably based; and

(iii) the terms and conditions upon which the Spare Capacity may be made available. These terms and conditions may vary depending on the category or categories of Services that may be provided by the Spare Capacity. Where a Prospective User is seeking access to the Firm Service the Terms and Conditions will be those in Schedule D.

(d) In order to submit a complying bid, a Prospective User must provide to Service Provider by the date specified in the Notice of Auction for Spare Capacity:

(i) the completed auction application registration;

(ii) the required financial security in the form and amount specified by Service Provider; and

(iii) the terms and conditions relevant to the Service to which the bid applies in a form that is capable of immediate acceptance by Service Provider.

(e) A Prospective User may consult with Service Provider on potential alternative terms and conditions prior to submitting a bid under section 5.5.2~~5.2.3~~(d).

(f) A bid submitted under section 5.5.2(d) is an access request, and the date specified in the Notice of Auction for Spare Capacity as the date by which bids must be lodged is the access request date for that access request.

(g) Each complying bid for Spare Capacity will be deemed to be an irrevocable access request for Spare Capacity capable of immediate acceptance.

5.5.3~~5.2.4~~ If complying bids do not exceed Spare Capacity

(a) This section 5.5.3~~5.2.4~~ applies only if the aggregate of all complying bids for Spare Capacity in the auction referred to in 5.5.2~~5.2.3~~ does not exceed the Spare Capacity stated in the Notice of Auction for Spare Capacity.

~~(b) In such case, each complying bid for Spare Capacity will be deemed to be an irrevocable request for Spare Capacity capable of immediate acceptance.~~

(b) Service Provider must inform Prospective User, within 15 Business Days after the access request date, that Service Provider accepts provision of the Service requested on the terms and conditions relevant to that Service which were provided in the Prospective User's bid.

(c) Service Provider may deal with complying bids for Spare Capacity in any order provided that Service Provider uses reasonable endeavours to ensure that no complying bid is ultimately disadvantage as a result.

~~(d) Spare Capacity that has not been taken up in the auction will be placed on the Spare Capacity Register and will be made available on a first come first served basis to Prospective Users who will contract for that Capacity within 2 months of it becoming unutilised.~~

5.5.4~~5.2.5~~ If complying bids exceed Spare Capacity

(a) This section 5.5.4~~5.2.5~~ applies if the aggregate of all complying bids received on or before the auction cannot be satisfied by the Spare Capacity stated in the Notice of Auction for Spare Capacity.

(b) Immediately after the auction, Service Provider will rank the applications on the basis of its assessment of the Net Present Value of the respective applications, from highest to lowest. The New Present Value *[sic]* will be calculated using:

i. The Prospective User's nominated tariff;

ii. The Prospective User's requested capacity requirement;

iii. The Prospective User's requested contract term;

iv. The Prospective User's requested contract commencement date; and

v. The Service Provider's allowed rate of return as a discount rate.

As there are a number of variables to the NPV calculation (price, volume, term, commencement date), it is not possible to provide an advance determinative ranking of bids. However, Service Provider will include information to the effect that, all other things remaining equal:

i. A bid at a higher offer price will outrank a bid at a lower price;

ii. A bid for a larger volume will outrank a bid for a lower volume;

iii. A longer term contract will outrank a shorter term contract;

iv. A contract with an earlier commencement date will outrank a contract with a later commencement date.

Owing to the nature of present value calculations, an application featuring a large volume, long-term contract could outrank a higher priced lower volume, shorter term application.

All applications will be discounted at the same discount rate.

(c) Service Provider will then allocate the Spare Capacity amongst the auction participants on the basis of the ranking performed pursuant to section 5.5.4~~5.2.5~~ (b).

(d) Within 25 Business Days after the access request date, Service Provider must:

(i) inform each Prospective User of whether the Prospective User has been allocated Spare Capacity in the auction; and

(ii) for those Prospective Users allocated Spare Capacity in the auction, inform each Prospective User that Service Provider accepts provision of the Service requested on the terms and conditions relevant to that Service which were provided in the Prospective User's bid.

5.5.5~~5.2.6~~ Reserve price

Service Provider may set a reserve price for the auction. For the provision of the Firm Service the reserve price will not exceed the Reference Tariff. If a reserve price applies this must be stated in the Notice of Auction for Spare Capacity.

5.6~~5.3~~ Developable Capacity

5.6.1~~5.3.1~~ Service provider to undertake investigations to determine if Developable Capacity is available

(a) If

(i) a Prospective User requests Service Provider to prepare a proposal to perform an investigation under ~~Rule 112 of the NGR~~section 5.3.3(a) above; or

(ii) Service Provider determines on the basis of the registrations of interest for Services received under section 5.3~~5.1~~ and any other available information that there is likely to be sufficient demand for a category or categories of Services that could be provided by means of

Developable Capacity, and an investigations ~~are~~is required to determine whether Developable Capacity can be made available,

Service Provider will notify each Prospective User that has lodged a registration of interest that Service Provider ~~may commence to undertake such investigations~~needs to carry out an investigation.

(b) Service Provider may:

(i) notify Prospective Users that have not lodged ~~a~~ registrations of interest that it may ~~be commencing~~carry out an investigations ~~to~~ determine whether Developable Capacity can be made available, and advise those Prospective Users that they should lodge registrations of interest in accordance with section 5.3 above within 20 Business Days; and~~,~~

(ii) where the circumstances allow, ~~will~~ publish in a local and national daily newspaper, a Developable Capacity Notice stating that Service Provider may ~~commence to undertake such~~carry out an investigations~~,~~ and that ~~if a~~ Prospective Users ~~may~~who want to acquire Services provided by ~~that~~ Developable Capacity in the event that it becomes available~~, that the Prospective User~~ should lodge a registration of interest in accordance with section 5.3~~5.1 with Service Provider~~above within 20 ~~Gas~~Business Days.

(c) Where Service Provider ~~decides that it will~~needs to undertake an investigations ~~to~~ determine whether Developable Capacity can be made available, Service Provider ~~will advise~~must provide each of Prospective User that has lodged a registration of interest ~~of the nature, likely duration and cost of the investigations~~with a statement of the nature of the investigation, and the reasonable costs of the investigation that the Prospective User would be required to meet. Where there is more than one Prospective User considering participating in the investigations~~,~~ Service Provider will advise each Prospective User of its share of the estimated cost of the investigations~~.~~ This will be determined as the proportion that their requested capacity bears to the total requested capacity of all Prospective Users participating in the investigations~~.~~ ~~The Prospective User may then determine whether it wants Service Provider to undertake the investigations.~~

(d) Service Provider is only obliged to undertake an investigations ~~if~~ one or more Prospective Users agree to ~~bear~~meet the reasonable costs of the investigations~~.~~ The Service Provider will conduct any investigations ~~to~~ the standard of a reasonable and prudent pipeline operator.

(e) Agreement by a Prospective User to meet the reasonable costs of an investigation, which must be within 5 Business Days of the Service Provider providing a statement of the nature of the investigation and of the costs to be met, is an access request, and the date on which the Service Provider is notified of the Prospective User's agreement is the access request date for the Prospective User's access request.

(f) If Service Provider needs to carry out an investigation, and Prospective Users agree to meet the reasonable costs, Service Provider must carry out the investigation and, within 25 Business Days of the access request date, inform Prospective Users that:

(i) Service Provider can make available Developable Capacity; or

(ii) Service Provider is unable to make available Developable Capacity, in which case the Service Provider must:

(A) provide the Prospective User with written reasons explaining why the Developable Capacity cannot be made available; and

(B) if Developable Capacity may be made available at some time in the future, give details (to the extent circumstances reasonably allow) of when the Developable Capacity is likely to become available.

(g) If, after carrying out an investigation, Service Provider informs Prospective Users that Developable Capacity can be made available, Service Provider must, within 15 days of informing the Prospective User, provide the Prospective User with the terms and conditions on which the Service Provider is prepared to provide Service using the Developable Capacity (the **access proposal**).

(f) If Prospective User intends to access a Service based on the access proposal provided by the Service Provider under (g) above, then the Prospective User must notify the Service Provider of its intention within 15 Business Days of receiving the access proposal.

(g) If the Prospective User wants to request amendments to the access proposal provided by Service Provider under (g) above, the Prospective User must provide Service Provider with requested amendments within 15 Business Days of receiving the access proposal.

(h) Service Provider must respond to the Prospective User's requested amendments to the access proposal within 15 Business Days.

(i) If the parties have not agreed on the access proposal, or some negotiated modification of it, within a further 20 Business Days of Service Provider's response under (h), then Service Provider is taken to have rejected the Prospective User's access request.

~~(e) Where a Prospective User declines to meet the cost of investigations that Prospective User's Application will have lower priority than Applications where the Prospective Users have agreed to bear the costs of the investigations, and will maintain relative priority with other Applications where the Prospective Users have not agreed to bear the costs of the investigations. For the purpose of sub-section 5.3.1(d) a Prospective User is only obliged to bear those costs of the investigations that are reasonably incurred.~~

~~(f) A Prospective User who has paid for investigations will, on entering into appropriate confidentiality arrangements, receive a written report that:~~

~~(i) describes the options considered to provide the Developable Capacity; and~~

~~(ii) describes Service Provider's preferred option to provide the Developable Capacity or provides reasons why no recommendation is made.~~

~~(g) Where a Prospective User bears the costs of investigations and the Prospective User decides not to proceed with the Application that Prospective User may assign:~~

~~(i) the Application to which the investigations relate; and~~

~~(ii) information in the possession of that Prospective User relevant to the investigations,~~

~~to a bona fide assignee and that assignee may use the results of the investigations provided that the assignment does not disclose confidential information without the consent of persons to whom such information relates including GGT.~~

~~(h) Where a Prospective User bears the costs of investigations GGT must provide that Prospective User with an itemisation of the costs incurred by GGT as soon as reasonably practicable following the completion of the investigations and prior to a Prospective User being obliged to pay those costs.~~

5.6.2~~5.3.2~~ Procedures when Capacity can be made available with investment in Developable Capacity

(a) Where Service Provider has, acting as a reasonable and prudent pipeline operator, reasonably determined on the basis of ~~the~~an investigation~~s~~ undertaken and the registrations of interest for Services that have been lodged that technically and economically feasible Developable Capacity can be made available, Service Provider will enter into negotiations with any Prospective Users with respect to any part of the Developable Capacity.

(b) Where there is more than one Prospective User requesting Developable Capacity, concurrent negotiations will be held with all relevant Prospective Users to determine the appropriate scale and scope of any potential investment for any part of Developable Capacity.

(c) In accordance with Rule 103(3), the outcome and timing of the conclusion of negotiations with each Prospective User will determine the order of priority between Prospective Users in respect of Developable Capacity, and may result in more than one Prospective User gaining access to Developable Capacity at the same time.

5.6.3~~5.3.3~~ Service Provider is bound to undertake certain developments of capacity

(a) Subject only to paragraphs (b), (c) and (d) below, Service Provider must undertake an Expansion to ~~provide~~make available Developable Capacity if requested by a ~~User or~~ Prospective User where it is:

(i) technically and economically feasible; and

(ii) consistent with the safe and reliable operation of the Pipeline.

(b) Service Provider may elect, but cannot be required, to fund, in whole or part, an Expansion unless the extension and expansion requirements of the applicable access arrangement provide for the relevant funding.

(c) Where an Expansion is proposed, Service Provider is not required to extend the geographical range of the Pipeline unless otherwise agreed by Service Provider.

(d) A ~~User or~~ Prospective User acquires no interest in a Pipeline by funding an Expansion unless the Service Provider agrees.

Appendix 6 Extension and Expansion Requirements

Given the changes to the National Gas Rules that occurred after GGT's initial (December 2018) submission to the ERA, the ERA asked for and allowed GGT to provide additional information to clarify, substantiate and/or amend its access arrangement proposal for extension and expansion requirements.

GGT's further (May 2019) proposed amendments to section 7 of the access arrangement to address the new requirements of rule 104 are reproduced below.[320]

7 Extensions and Expansions

7.1 Extensions/Expansions

Other than as required under the National Gas Rules and the GGP State Agreement, the Service Provider will not be required to provide funds for work involved in making an Extension or Expansion, unless the Service Provider agrees to do so.

7.2 Application of Access Arrangement to Pipeline Extensions/Expansions

(a) Extensions

If Service Provider proposes an Extension of the Covered Pipeline, it must apply to the Regulator for the Regulator to decide whether the proposed Extension will be taken to form part of the Covered Pipeline such that this Access Arrangement would apply to the Incremental Services provided by means of the proposed Extension.

The application given by the Service Provider must be submitted to the Regulator when the Extension is first being considered, prior to making its final investment decision.

The Regulator's decision, may be made on such reasonable conditions as determined by the Regulator consistent with the National Gas Objective and will have the effect stated in its decision on the Service Provider's proposed pipeline Extension.

(b) Expansions

If there is an Expansion ~~at any time~~during the Access Arrangement Period, this Access Arrangement will apply to all and any Incremental Services provided after the Expansion comes into operation~~, except to the extent (if any) that the Service Provider proposes (by application to the Regulator) and the Regulator agrees that this Access Arrangement will not apply to all or any of those Incremental Services~~.

~~Any such application by the Service Provider must be submitted to the Regulator when the Expansion is first being considered, prior to making its final investment decision.~~

7.3 Pipeline Extensions/Expansions and Tariffs

(a) Pipeline Extensions or Expansions which form part of the Covered Pipeline such that this Access Arrangement will apply under section 7.2 to any

[320] GGT, *'GGP Access Arrangement revision: ERA Information Requests 2, 3, 4 and 5'*, [email] 30 May 2019.

Incremental Service provided by means of them, will result in no change to the Reference Tariff applied to a User when those Extensions or Expansions have been fully funded by that User's capital contributions except to contribute to Service Provider's operating costs in connection with those Extensions and Expansions. Any change to Reference Tariffs may occur only pursuant to the processes set out in Part 8 of the NGR. To avoid doubt, and without limiting the above in any way, ~~neither the Service Provider nor any of the Owners~~Service Provider will not benefit through a change to Reference Tariffs (except as regards any contributions to Service Provider~~'s~~ operating costs) to the extent that:

(i) any such Extension or Expansion is undertaken for or in relation to any adjustments to Capacity occurring (or which, but for the Extension or Expansion, would occur) as a result of the application of the provisions of the Gas Supply (Gas Quality Specifications) Act 2009 (WA); and

(ii) the funding of that Extension or Expansion was made by someone other than ~~the~~ Service Provider or any ~~of the Owners or any~~ Related Body Corporate of Service Provider ~~or any of the Owners~~.

(b) Users of Incremental Services which have not made capital contributions towards capacity investment needed to provide those Incremental Services which they use and which have been funded by others may be liable to pay a Surcharge as provided under Rule 83 of the National Gas Rules.

(c) Pipeline Extensions or Expansions funded by Service Provider and which form part of the Covered Pipeline such that this Access Arrangement will apply under section 7.2 to any Incremental Services provided by means of them, may result in the application of a Surcharge on Users subject to Service Provider providing written notice to the Regulator, and the Regulator approving the same, in accordance with Rule 83 of the NGR.

Appendix 7 Tariff Model – Public Version

This appendix is published separately on the ERA's website.