



GOLDFIELDS GAS PIPELINE

APPROVED

ACCESS ARRANGEMENT INFORMATION

**Approved by
Economic Regulation Authority**

**As Revised
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GOLDFIELDS GAS PIPELINE CONTACT DETAILS

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1 INTRODUCTION

This Access Arrangement Information (AAI) is submitted by Goldfields Gas Transmission Pty. Ltd. (GGT), the Service Provider for the Goldfields Gas Pipeline (GGP). This AAI supports the Access Arrangement for the GGP approved by the Economic Regulation Authority.

Projections in this AAI are based on a number of assumptions. GGT does not make any representation or warranty as to the accuracy of the assumptions.

Years shown in the tables refer to calendar years. The totals in some tables in this AAI may not sum due to rounding.

The model used by GGT to derive Total Revenue for this Access Arrangement Period is a quarterly model. Different results would be obtained if Total Revenue were calculated on an annual basis.

A detailed description of the GGP is set out in Section 10. A map of the GGP is available upon request to GGT by bona fide Users and Prospective Users of the GGP.

2 TOTAL REVENUE

The Total Revenue has been determined using the cost of service method as permitted under the Code. Total Revenue is equal to the total cost of providing all Services, which is the sum of:

- a return on the Capital Base (including on New Facilities Investment forecast for the Access Arrangement Period), calculated using the permitted Rate of Return;
- Depreciation; and
- Non Capital costs, being the operating, maintenance and other non-capital costs incurred in providing Services.

In determining the total cost of providing all Services for the GGP:

- a nominal rate of return has been applied to the nominal Capital Base, and
- Depreciation and the Non Capital costs are expressed as nominal values.

The total cost of providing all Services for the period 2000 to 2009 is shown in Table 1.

Table 1 : Total Costs (\$m, nominal)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Return	52.2	51.7	51.2	50.6	50.4	49.6	48.8	48.1	47.3	46.3
Depreciation	10.4	10.6	10.8	10.9	11.2	11.4	11.6	11.9	12.1	11.6
Non Capital costs	11.1	12.2	14.0	16.4	14.4	17.9	16.9	16.8	18.9	20.3
Total	73.6	74.5	76.0	78.0	76.0	79.0	77.3	76.8	78.3	78.2

The present value of these costs (using a discount rate equal to a pre-tax nominal Rate of Return of 10.6%) is \$475.3 million at 31 December 1999.

The Reference Tariff is derived so that the present value of the forecast annual revenue (obtained by applying the Reference Tariff, adjusted annually to reflect movements in expected inflation, to the forecast volumes for the GGP) is \$475.3 million. This forecast annual revenue is shown in Table 2.

Table 2 : Annual Revenue (\$m, nominal)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Revenue	63.9	66.6	70.8	72.4	77.1	82.7	85.9	89.0	91.8	92.4

3 INITIAL CAPITAL BASE

The Initial Capital Base of the GGP (at 31 December 1999) is \$513.7 million.

For the purpose of calculating Depreciation, the assets which form the Initial Capital Base have been allocated into the asset classes shown in Table 3.

Table 3 : GGP Initial Capital Base (\$m, 31 December 1999)

Asset class	Value
Pipeline and laterals	438.7
Mainline valve and scraper stations	9.2
Compressor stations	41.6
Receipt and delivery point facilities	1.5
SCADA and communications	10.1
Cathodic protection	1.8
Maintenance bases and depots	7.7
Other assets	0.4
Linepack	1.1
Working capital	1.5
Initial Capital Base	513.7

4 NEW FACILITIES INVESTMENT

Minor capital expenditure is required during the life of any pipeline. This capital expenditure covers replacement of miscellaneous capital equipment and enhancements of peripheral and utility systems and equipment.

In addition to the minor capital expenditure, a compressor station was constructed at Wiluna in 2001 and Paraburdoo in 2003/2004. A second compressor is planned at Paraburdoo in 2006/2007.

Capital expenditure for the Access Arrangement period is as shown in Table 4.

Table 4 : New Facilities Investment (\$m, nominal)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Pipeline and laterals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mainline valve and scraper stations	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Compressor stations	2.9	8.1	0.6	9.8	4.1	0.4	3.6	3.7	0.0	0.0
Receipt and delivery point facilities	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
SCADA and communications	0.0	0.0	0.1	0.1	0.4	0.1	1.0	1.0	0.0	0.0
Cathodic protection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maintenance bases and depots	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other assets	0.5	0.2	0.4	0.2	1.6	1.1	0.7	0.8	1.6	1.7
Total	3.6	8.4	1.1	10.1	6.1	1.6	5.3	5.4	1.6	1.7

5 DEPRECIATION

The assets comprising the Capital Base for the GGP have been depreciated from 2000 to 2009 by applying the straight line method.

The asset lives and remaining lives as at 31 December 1999 are shown in Table 5.

Table 5 : Asset lives and remaining lives

Asset class	Life of new assets (years)	Remaining life of initial assets (years)
Pipeline and laterals	70	64.5
Mainline valve and scraper stations	50	44.5
Compressor stations	30	24.5
Receipt and delivery point facilities	30	24.5
SCADA and communications	15	9.5
Cathodic protection	15	9.5
Maintenance bases and depots	50	44.5
Other assets	10	4.5

The amounts of Depreciation for each class of assets are shown in Table 6.

Table 6 : Depreciation (\$m, nominal)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Pipeline and laterals	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Mainline valve and scraper stations	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Compressor stations	1.7	1.9	2.1	2.2	2.5	2.6	2.6	2.7	2.8	2.8
Receipt and delivery point facilities	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
SCADA and communications	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	0.7
Cathodic protection	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1
Maintenance bases and depots	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Other assets	0.1	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.8
Total	10.4	10.6	10.8	10.9	11.2	11.4	11.6	11.9	12.1	11.6

Changes in the value of the asset base from 2000 to 2009 are shown in Table 7.

Table 7 : GGP Capital Base roll forward 2000- 2009 (\$m, nominal)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Opening asset value	513.7	507.3	505.8	495.5	496.1	490.3	480.3	474.2	467.8	457.1
Capital expenditure	3.6	8.4	1.1	10.1	6.1	1.6	5.3	5.4	1.6	1.7
Change in working capital	0.3	0.7	-0.7	1.4	-0.7	-0.1	0.3	0.0	-0.2	0.2
Depreciation	10.4	10.6	10.8	10.9	11.2	11.4	11.6	11.9	12.1	11.6
Closing asset value	507.3	505.8	495.5	496.1	490.3	480.3	474.2	467.8	457.1	447.4

6 RATE OF RETURN

The Rate of Return used for the calculation of Total Revenue is derived as an average of the cost of equity and the cost of debt, each cost being weighted, as appropriate, by the contribution of equity or debt to total financing. The cost of equity is determined using the CAPM. The cost of debt is the sum of the nominal risk free rate of return and a cost of debt margin.

The ranges of parameter values applied in determining the Rate of Return are set out in Table 8. These are the values determined by the Economic Regulation Authority in the Final Decision dated 17 May 2005.

Table 8 : Parameter values for determination of a Rate of Return for the GGP

Parameter	Value
Nominal risk free rate	5.45%
Real risk free rate	2.69%
Expected inflation	2.69%
Market risk premium	5.0% - 6.0%
Equity beta	0.80 – 1.33
Cost of debt margin	0.980 – 1.225
Corporate tax rate (average 2000-2009)	30.7%
Franking credit value	0.3 – 0.6
Debt to total assets ratio	60%
Equity to total assets ratio	40%

Table 9 shows the range of Rate of Return values derived from these parameters.

Table 9 : Range of pre-tax nominal rate of return

Rate of return	Range
Forward transformation method	8.2% - 10.8%

A pre-tax nominal rate of return of 10.6%, being a value within the range determined by the Authority, was used in determining the Reference Tariffs.

7 NON CAPITAL COSTS

Non Capital costs are shown in two major categories: 'Operating & Maintenance and Administration & General' and 'Corporate Overheads'.

Pipeline 'Operating & Maintenance' costs are those incurred in the operation and maintenance of the GGP and associated facilities. They include the costs of direct operations, operations support, engineering support, pipeline maintenance and easement management. 'Administration & General' costs are those incurred in the management of the GGP, including the provision of legal and regulatory services, public relations, communications leases, commercial management, support to direct operations and accounting.

'Corporate Overheads' costs include costs incurred by the GGT Joint Venture participants in owning and managing their interests in the Joint Venture and the provision of pipeline services. For the GGP, existing and projected Non Capital costs are as shown in Table 10.

Table 10 : Non Capital Costs (\$m, nominal)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Operating & Maintenance and Administration & General	9.4	10.6	12.1	14.3	12.6	15.9	14.9	14.7	16.7	18.2
Corporate Overheads	1.7	1.7	1.9	2.1	1.8	2.0	2.0	2.1	2.1	2.2
Total	11.1	12.2	14.0	16.4	14.4	17.9	16.9	16.8	18.9	20.3

8 VOLUMES

The current firm capacity of the GGP is between 105 TJ/d and 110 TJ/d. This range of values of capacity will change if loads are redistributed between pipeline outlet points.

The GGP is currently operating at or near to capacity. Table 11 shows the forecast MDQ and average throughput in terajoules/day.

Table 11 : Volume Forecasts TJ/D

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
MDQ	90.5	91.3	94.6	93.5	97.0	105.6	108.4	110.0	109.8	107.9
Throughput	81.4	83.0	82.2	83.3	86.1	93.7	96.4	97.7	97.3	95.7

9 REFERENCE TARIFF AND COST ALLOCATION

9.1 Reference Tariff Structure

There is one Reference Service offered under the Access Arrangement. That service is a Firm Service.

The Reference Tariff for the Firm Service has three components which have been designed to broadly reflect the fixed and variable components of transportation costs through the GGP.

The three components of the Reference Tariff are:

- Toll Charge (expressed in \$/GJ MDQ);
- Capacity Reservation Charge (expressed in \$/GJ MDQ km); and
- Throughput Charge (expressed in \$/GJ throughput km).

9.2 Cost Allocation

The Reference Tariff is calculation on the basis that all users of the GGP are users of the Reference Service.

The present value of the Total Revenue over the Access Arrangement Period is allocated to the Toll Charge, the Capacity Reservation Charge and the Throughput Charge in the proportions shown in Table 12.

Table 12 : Allocation of Total Revenue to Reference Tariff

Tariff component	Proportion
Toll Charge	11.3%
Capacity Reservation Charge	72.2%
Throughput Charge	16.5%

9.3 Incentive Mechanism

Reference Tariffs are determined for the whole Access Arrangement Period to follow a path forecast to deliver the Total Revenue, and will be adjusted annually to reflect movements in the Consumer Price Index. This form of regulation provides an incentive to GGP as follows:

- the level of the Reference Tariff is designed to enable GGT to develop the market for the Reference Service and other services as GGT will retain for the Access Arrangement Period the benefit of volumes in excess of those forecast;

- the prospect of retaining improved returns for the Access Arrangement Period provides an incentive to GGT to minimise the cost of providing Services.

9.4 Other Revenue

The Reference Tariff has been designed to recover Total Revenue. No allowance has been made for other revenue that may accrue from any other charges payable by Users as this revenue is not expected to be material. Other charges include, but are not limited to, used gas charges, supplementary quantity option charge and charges payable in respect of receipt points and delivery points such as the connection charge, account establishment charge and the annual account management charge.

10 SYSTEM DESCRIPTION

The GGP extends from Yarraloola, in the Pilbara region of Western Australia, to Kalgoorlie, in the southern Goldfields region. The GGP transports gas from producers in the Carnarvon Basin to a variety of end users in the East Pilbara and Goldfields.

The pipeline system comprises:

- DN 400 mm and DN 350 mm main pipeline sections,
- the DN 200 mm lateral to Newman,
- compressor stations on the pipeline,
- custody transfer meter stations at the Yarraloola inlet and various outlet points (see below),
- a head office in Perth,
- a Gas Control centre in Perth,
- maintenance bases and regional offices in Karratha, Newman, Leinster, and Kalgoorlie,
- a backup Gas Control centre in Kalgoorlie,
- a Supervisory Control and Data Acquisition (SCADA) system,
- a satellite data communications system,
- a satellite telephone system,
- a field operations radio communications system, and
- operations, maintenance, commercial, quality, safety, and environmental management systems.

Input to the pipeline is currently made at Yarraloola, near Compressor Station One on the Dampier to Bunbury Natural Gas Pipeline.

Gas is currently being delivered to third party take off points which then transport gas to end users at:

- Newman;
- Plutonic
- Jundee;
- Mount Keith;
- Leinster;
- Murrin Murrin;
- Cawse;
- Parkeston;
- Kalgoorlie North (to domestic distribution);
- Kalgoorlie South;
- Kambalda (via third party lateral from Kalgoorlie South).

Key GGP system characteristics and parameters include:

Commissioned	June to October 1996
Pipeline licence WA - PL 24	Expires 27 January 2016
Pipeline length	1378 kilometres
Pipeline diameter: Yarraloola to Newman	DN 400 mm (16 inch)
Pipeline diameter: Newman to Kalgoorlie	DN 350 mm (14 inch)
Maximum Allowed Operating Pressure	10.2 Mpa
Pipe grade	X70
Corrosion mitigation	Trilaminate pipe coating; Impressed current cathodic protection
Compressor station sites	4
Installed compression	4 x 1290 kW (recips) 2 x 1200 kW (turbines)
Compressors	4 x Waukesha reciprocating, gas engine driven 2 x Solar Saturn gas turbines
Active inlet custody transfer meter stations	1
Active sales outlet custody transfer meter stations	11
Main Line Valves	11
Scraper (pig) launch and/or receive facilities	8
Maintenance bases	4
Pipeline control	remote via SCADA
Right of Way identification	marker signs; at least one visible at any ROW location