



**Access Arrangement Information
for the
WA Gas Networks Gas Distribution Systems
(Amended as per requirements of the Economic Regulation
Authority published 28 April 2011)**

WA Gas Networks Pty Ltd

ABN 90 089531 975

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1 ACCESS ARRANGEMENT INFORMATION FOR THE WAGN GDS

This document is the Access Arrangement Information for the WA Gas Networks Gas Distribution Systems (WAGN GDS) prepared pursuant to the National Gas Access Law.

WA Gas Networks submitted its proposed revised access arrangement for the Mid-West and South-West Gas Distribution Systems to the Economic Regulation Authority (ERA) on 29 January 2010 under the National Gas Access (Western Australia) Act 2009 which came into effect on 1 January 2010. On 28 February 2011 the ERA issued its Final Decision on the proposed revised Access Arrangement (Final Decision), as required by Rule 62, in which it did not approve the Access Arrangement revisions proposed by WAGN. Under the National Gas Rules, the ERA must itself propose an access arrangement or revisions to the access arrangement (as the case requires) for the relevant pipeline within two months of the release of the final decision. The ERA has revised the WAGN Access Arrangement for the WAGN GDS in accordance with the proposals in its Final Decision.

This document is the Access Arrangement Information for the WA Gas Networks Gas Distribution Systems (WAGN GDS) prepared pursuant to the National Gas Access Law.

This Access Arrangement Information (AAI) contains the information that enables users and prospective users to understand the derivation of elements of the access arrangement. Where necessary this AAI refers to the relevant sections of the ERA Final Decision.

1.1 Description of WA Gas Networks Gas Distribution Systems

The WAGN GDS is a system of non-contiguous Gas Distribution Pipelines and associated facilities located in the Perth metropolitan area (including Ellenbrook, Rockingham and Mandurah), and in a number of regional centres in the south west of Western Australia.

The regional centres in which the WAGN GDS is located are:

- Geraldton;
- Eneabba;
- Pinjarra;
- Harvey;
- Kemerton;
- Bunbury;
- Capel; and
- Busselton.

Discrete Distribution Pipeline segments, or Sub-networks, make up the WAGN GDS. At the date of this Access Arrangement Information, these comprise in excess of 12,000 kilometres of high pressure, medium pressure, medium pressure/low pressure Systems,

and low pressure Gas Distribution Pipelines. Gas is delivered into each of these Sub-networks from 15 receipt points immediately downstream of meter stations on the Dampier to Bunbury Natural Gas Pipeline, and from one receipt point on the Parmelia Pipeline.

1.2 Interpretation

Unless the contrary intention is expressed, words or phrases in this document have the same meaning as those defined in section 12 (Definitions and Interpretation) of the Access Arrangement for the WAGN GDS.

A reference in this document to:

Earlier Access Arrangement Period means the Access Arrangement Period which preceded the Current Access Arrangement Period; and

Initial Access Arrangement Period means the Access Arrangement period which preceded the earlier Access Arrangement Period.

Where a word or phrase has not been defined in this document then, unless the contrary intention is expressed, the word or phrase is to be given the meaning prescribed in the National Gas Access Law, the National Gas Rules or the National Gas Regulations (as relevant).

1.3 Compliance

Rule 72 sets out specific requirements for Access Arrangement Information relevant to revenue and price regulation. The specific requirements for Access Arrangement Information for an Access Arrangement Period which commences at the end of the earlier Access Arrangement Period, are summarised in Table 1 of this Access Arrangement Information.

Information in respect of each of the specific requirements shown in Table 1 is provided in sections 3 to 15 of this document. Section 2 sets out, in accordance with the requirement of Rule 73, the basis on which financial information is presented in the document.

Table 1
Specific requirements for access arrangement information

NGR	Requirement
Rule 72(1)(a)	Expenditure and pipeline usage over the earlier Access Arrangement Period: (i) Capital Expenditure (by asset class) over the earlier Access Arrangement Period; (ii) Operating Expenditure (by category) over the earlier Access Arrangement Period; and (iii) pipeline usage over the earlier Access Arrangement Period, in terms of minimum, maximum and average demand, and customer numbers in total and by tariff class.
Rule 72(1)(b)	Explanation of how the capital base is arrived at, and demonstration of how the capital base increased or diminished over the earlier Access Arrangement Period.
Rule 72(1)(c)	Projected capital base over the access arrangement period, and: (i) the basis for the forecast of conforming Capital Expenditure used in making the projection; and (ii) a demonstration of how the depreciation used in making the projection has been derived by applying the depreciation method set out in the access arrangement.
Rule 72(1)(d)	To the extent practicable, forecasts of pipeline capacity and of the utilisation of pipeline capacity over the access arrangement period, and the bases on which those forecasts have been derived.
Rule 72(1)(e)	A forecast of Operating Expenditure over the access arrangement period, and the basis on which the forecast has been derived.
Rule 72(1)(f)	Key performance indicators used to support expenditure to be incurred over the access arrangement period.
Rule 72(1)(g)	The rate of return, the assumptions on which the rate has been calculated, and a demonstration of how it has been calculated.
Rule 72(1)(h)	The method for dealing with taxation, and a demonstration of how tax has been calculated.
Rule 72(1)(i)	Efficiency gains or losses carried over as a result of the operation of an incentive mechanism in the earlier Access Arrangement Period.
Rule 72(1)(j)	The approach to the setting of tariffs, including: (i) the basis for the setting of Reference Tariffs, the method used to allocate costs, and a demonstration of the relationship between costs and tariffs; and (ii) a description of other pricing principles employed.
Rule 72(1)(k)	The rationale for the reference tariff variation mechanism.
Rule 72(1)(l)	The rationale for any incentive mechanism.
Rule 72(1)(m)	The total revenue to be derived from pipeline services for each year of the access arrangement period.

2 BASIS ON WHICH FINANCIAL INFORMATION IS PROVIDED [Rule 73]

Financial information in this document is provided on a real basis. All financial information is expressed in constant prices at December 2009 by escalating, where necessary, at the rate of inflation as measured by the Consumer Price Index All Groups, Weighted Average Eight Capital Cities.

The values and forecasts of the Consumer Price Index shown in Table 2 have been used in expressing the financial information in this document in constant prices at December 2009.

**Table 2
Consumer Price Index (All Groups, Weighted Average Eight Capital Cities) 2005-2009**

	2004	2005	2006	2007	2008	2009
December quarter	146.5	150.6	155.5	160.1	166.0	169.5
June Quarter	144.8	148.4	154.3	157.5	164.6	167.0

For the period 2005 to 2009, financial data have been reported on a calendar basis. Escalation has been based on the December Consumer Price Index as this represents the end of the year. For the period 1 January 2010 onwards, financial data is reported on a financial year basis. In this case, escalation has been based on the June Consumer Price Index as this represents the end of the financial year.

3 EXPENDITURE AND PIPELINE USAGE OVER THE SECOND ACCESS ARRANGEMENT PERIOD [Rule 72(1)(a)]

3.1 Capital expenditure over earlier Access Arrangement Period [Rule 72(1)(a)(i)]

Capital Expenditure, by asset class, during the earlier Access Arrangement Period, is shown in Table 3.

**Table 3
Capital expenditure by asset class 2005-2009
(\$ million, December 2009)**

	2005	2006	2007	2008	2009
High pressure mains	0.520	1.547	1.608	3.310	10.367
Medium pressure mains	-	-	-	-	-
Medium/low pressure mains	7.891	8.932	13.164	11.612	8.623
Low pressure mains	-	-	-	-	-
Regulators	0.112	0.798	0.653	0.185	0.726
Secondary gate stations	-	-	-	0.013	1.657
Buildings	-	-	0.042	0.117	0.150
Meters and service pipes	18.589	21.890	19.392	17.669	19.026
Equipment and vehicles	-	-	-	-	-
Information technology	0.417	0.001		2.602	1.883
Full retail contestability	-	-	-	-	-
Land	-	-	-	-	-
Total	27.528	33.168	34.859	35.508	42.434

3.2 Operating expenditure over the earlier Access Arrangement Period [Rule 72(1)(a)(ii)]

Operating Expenditure, by category, during the earlier Access Arrangement Period, is shown in Table 4.

Table 4
Operating expenditure by category 2005-2009
 (\$ million, December 2009)

	2005	2006	2007	2008	2009
Network	24.815	26.130	24.007	23.322	24.301
Marketing	0.322	0.361	0.346	0.237	0.395
Corporate	5.764	5.810	6.668	4.522	6.277
Information technology	4.879	4.890	5.258	3.088	3.755
Full retail contestability	1.237	1.246	1.290	1.321	1.948
Regulatory cost	1.078	1.177	1.322	3.082	3.987
Unaccounted for gas	3.519	3.600	4.432	6.440	6.105
Ancillary services	0.597	0.572	0.580	0.724	0.706
Total	42.212	43.786	43.903	42.734	47.475

3.3 Pipeline usage over the earlier Access Arrangement Period [Rule 72(1)(a)(iii)]

Usage of the WAGN GDS during the earlier Access Arrangement Period is shown in Table 5 and Table 6. Table 5 shows minimum, maximum and average demand.

Table 5
Minimum, maximum and average demand 2005-2009 (TJ)

	2005	2006	2007	2008	2009
Minimum daily quantity	48	47	53	44	42
Maximum daily quantity	136	132	119	112	122
Average daily quantity	86	84	84	76	76

Customer numbers (including customers in receipt of prudent discounts), in total and by Tariff Class, are shown in Table 6. (WAGN GDS customers and Tariff Classes are explained in section 10.1 of this document.)

Table 6
Customer numbers by tariff class 2005-2009 (average for year)

	2005	2006	2007	2008	2009
Tariff Class A1	71	73	72	73	76
Tariff Class A2	93	96	97	98	99
Tariff Class B1	1,074	1,085	1,107	1,137	1,185
Tariff Class B2	5,988	5,810	6,218	6,677	7,249
Tariff Class B3	515,678	536,108	556,116	573,809	589,564
Total	522,903	543,171	563,609	581,793	598,171

4 OPENING CAPITAL BASE FOR CURRENT ACCESS ARRANGEMENT PERIOD [Rule 72(1)(b)]

In accordance with Rule 77(2), the Opening Capital Base for the Current Access Arrangement Period (the capital base at 1 January 2010) has been determined as:

- the Opening Capital Base for the earlier Access Arrangement Period;

plus:

- Conforming Capital Expenditure made, during the earlier Access Arrangement Period; and
- amounts determined in accordance with Rule 82 (Capital Contributions by Users to new Capital Expenditure), Rule 84 (amount rolled in from speculative Capital Expenditure account), and Rule 86 (re-use of redundant assets);

less:

- depreciation over the earlier Access Arrangement Period; and
- redundant assets identified during the earlier Access Arrangement Period; and
- the value of pipeline assets disposed of during the earlier Access Arrangement Period.

In the determination of the Opening Capital Base for the Current Access Arrangement Period, the following have been escalated, at the rate of inflation as measured by the Consumer Price Index and expressed in constant prices at December 2009:

- the Opening Capital Base for the earlier Access Arrangement Period;
- Conforming Capital Expenditure made, or to be made, during the earlier Access Arrangement Period; and
- depreciation over the earlier Access Arrangement Period.

The Opening Capital Base, by asset class, for the earlier Access Arrangement Period, expressed in constant prices at December 2009, is shown in Table 7.

Table 7
Capital base at 1 January 2005
(\$ million, December 2009)

Asset Category	
High pressure mains	197.136
Medium pressure mains	251.387
Medium/low pressure mains	118.814
Low pressure mains	31.981
Regulators	11.187
Secondary gate stations	2.125
Buildings	1.883
Meters and service pipes	124.248
Equipment and vehicles	2.886
Information technology	6.880
Full retail contestability	13.816
Land	6.645
Total	768.989

User contributions to Capital Expenditures during the earlier Access Arrangement Period are shown in Table 8. These contributions have been deducted from the appropriate Conforming Capital Expenditures for the purpose of determining the Opening Capital Base for the Current Access Arrangement Period.

Table 8
User Capital Contributions 2005-2009
(\$ million, December 2009)

	2005	2006	2007	2008	2009
Allocated to specific projects	-	0.049	1.310	0.036	1.135
Not allocated to specific projects	0.235	2.670	1.329	1.273	0.095
Total	0.235	2.719	2.639	1.308	1.230

No Capital Expenditure during the earlier Access Arrangement Period, in respect of which a Capital Contribution has been made by a User, has been added into the Opening Capital Base for the Current Access Arrangement Period.

During the earlier Access Arrangement Period:

- no amount has been withdrawn from a speculative Capital Expenditure account which should be added to the Capital Base in accordance with Rule 84; and
- there has been no re-use of redundant assets requiring an amount to be added to the Capital Base in accordance with Rule 86.

For the purpose of determining the Opening Capital Base for the Current Access Arrangement Period, depreciation of the Conforming Capital Expenditure made, or to be made, during the earlier Access Arrangement Period, is the forecast of depreciation made for the purpose of determining the Total Revenue and Reference Tariffs for the earlier Access Arrangement Period. This forecast of depreciation has been expressed in constant prices at December 2009 and is shown in Table 9.

Table 9
Depreciation 2005-2009
(\$ million, December 2009)

	2005	2006	2007	2008	2009
High pressure mains	1.972	1.979	1.987	1.995	2.002
Medium pressure mains	5.432	5.540	5.640	5.725	5.820
Medium/low pressure mains	3.346	3.380	3.416	3.450	3.490
Low pressure mains	1.159	1.159	1.159	1.159	1.159
Regulators	0.512	0.514	0.517	0.519	0.521
Secondary gate stations	0.109	0.110	0.110	0.110	0.0110
Buildings	0.105	0.105	0.106	0.106	0.106
Meters and service pipes	11.885	12.797	13.676	14.361	15.166
Equipment and vehicles	-	0.000	-	-	-
Information technology	1.376	2.139	2.799	3.353	4.153
Full retail contestability	2.763	2.763	2.763	2.763	2.763
Land	-	-	-	-	-
Total	28.661	30.486	32.171	33.540	35.291

No redundant assets were identified during the earlier Access Arrangement Period.

Asset disposals recognised during the earlier Access Arrangement Period are detailed in Table 10.

Table 10
Asset Disposals (\$million, December 2009)

	2005	2006	2007	2008	2009
Land					3.382
Buildings					1.028
Total					4.409

The Opening Capital Base for the Current Access Arrangement Period is, in these circumstances, \$781.859 million.

The way in which the Opening Capital Base for the Current Access Arrangement Period has been determined is demonstrated in Table 11.

Table 11
Opening capital base for Current Access Arrangement Period
(\$ million, December 2009)

	2005	2006	2007	2008	2009
Opening Asset Base	762.027	760.894	763.575	766.263	768.231
Conforming Capital Expenditure	27.528	33.168	34.859	35.508	42.434
The Vines					0.580
Adjustment for over-depreciation					10.315
Depreciation	-28.661	-30.486	-32.171	-33.540	-35.291
Asset Adjustment, Redundant Assets & Asset Disposal		-	-	-	-4.409
Closing Asset Base	760.894	763.575	766.263	768.231	781.859

5 PROJECTED CAPITAL BASE [Rule 72(1)(c)]

The projected Capital Base for the Current Access Arrangement Period is, in accordance with Rule 78, to be determined as:

- the Opening Capital Base for the Current Access Arrangement Period; plus
- forecast Conforming Capital Expenditure for the Current Access Arrangement Period; less
- forecast depreciation for the Current Access Arrangement Period; less
- the forecast value of Pipeline assets to be disposed of in the course of the Current Access Arrangement Period.

No Pipeline assets of material value are expected to be disposed of during the Current Access Arrangement Period.

5.1 Forecast Conforming Capital Expenditure [Rule 72(1)(c)(i)]

Table 12 shows forecast Conforming Capital Expenditure during the Current Access Arrangement Period.

Table 12
Forecast Conforming Capital Expenditure
(\$ million, December 2009)

	2010 ¹	2010/11	2011/12	2012/13	2013/14
High pressure mains	9.577	4.168	7.008	10.663	10.289
Medium pressure mains	-	-	-	-	-
Medium/low pressure mains	5.426	11.544	12.114	12.058	12.665
Low pressure mains	-	-	-	-	-
Regulators	0.668	0.261	0.229	0.267	0.203
Secondary gate stations	2.006	0.424	-	-	-
Buildings	0.454	2.057	6.691	-	-
Meters and service pipes	9.115	21.524	24.440	24.321	25.140
Equipment and vehicles	-	0.649	-	-	0.637
Information technology	3.061	4.581	3.456	5.003	1.617
Full retail contestability	-	-	-	-	-
Land	-	-	-	-	-
Total	30.307	45.208	53.939	52.311	50.551

¹ 1 January 2010 to 30 June 2010 only.

5.2 Forecast of depreciation [Rule 72(1)(c)(ii)]

For each of the classes of assets which comprise the WAGN GDS, forecast depreciation for the Current Access Arrangement Period has been derived using the straight line method.

The straight line method has been applied using the economic lives and, for the assets of the initial capital base, the remaining economic lives which are set out in Table 13.

Table 13
Asset lives for the derivation of forecast depreciation

	Economic life (years)	Remaining economic life of assets of initial capital base (years at 31 December 2009)
High pressure mains	120.0	95.0
Medium pressure mains	60.0	40.0
Medium/low pressure mains	60.0	30.0
Low pressure mains	60.0	22.0
Regulators	40.0	17.0
Secondary gate stations	40.0	14.0
Buildings	40.0	13.0
Meters and service pipes	25.0	0.0
Equipment and vehicles	10.0	-
Information technology	5.0	-
Full retail contestability	5.0	-

The forecast of depreciation for the Current Access Arrangement Period is shown in Table 14.

Table 14
Forecast of depreciation
(\$ million, December 2009)

	2010 ¹	2010/11	2011/12	2012/13	2013/14
High pressure mains	1.057	2.193	2.228	2.286	2.375
Medium pressure mains	2.426	4.851	4.851	4.851	4.851
Medium/low pressure mains	2.391	4.873	5.066	5.268	5.469
Low pressure mains	0.580	1.159	1.159	1.159	1.159
Regulators	0.285	0.587	0.593	0.599	0.606
Secondary gate stations	0.076	0.201	0.212	0.212	1.212
Buildings	0.017	0.052	0.103	0.270	0.270
Meters and service pipes	3.703	7.771	8.632	9.610	10.583
Equipment and vehicles	-	0.585	0.650	0.650	0.650
Information technology	0.414	1.450	2.366	3.057	3.833
Full retail contestability	0.000	-	-	-	-
Land	-	-	-	-	-
Total	10.948	23.723	25.861	27.963	30.007

¹ 1 January 2010 to 30 June 2010 only.

5.3 Projected Capital Base [Rule 72(1)(c)]

The determination of the projected Capital Base for the Current Access Arrangement Period is set out in Table 15.

Table 15

Projected Capital Base for Current Access Arrangement Period
(\$ million, December 2009)

	2010 ¹	2010/11	2011/12	2012/13	2013/14
Capital base	781.859	805.332	826.817	854.894	879.243
PLUS:					
Conforming Capital Expenditure	30.307	45.208	53.939	52.311	50.551
WestNet Energy	4.113				
LESS:					
Depreciation	10.948	23.723	25.861	27.963	30.007
Forecast asset disposals	-	-	-	-	-
Capital value of pipeline assets at end of year	805.332	826.817	854.894	879.243	899.786

¹ 1 January 2010 to 30 June 2010 only.

6 FORECAST DEMAND [Rule 72(1)(d)]

The forecasts of volumes of Gas to be delivered by Tariff Class, including volumes to be delivered to customers in receipt of prudent discounts, during the Current Access Arrangement Period, are detailed in Table 16.

Table 16
Forecast volumes of Gas delivered (TJ)

	2010 ¹	2010/11	2011/12	2012/13	2013/14
Tariff Class A1	6,029	11,947	12,165	12,680	12,900
Tariff Class A2	939	2,046	2,058	2,103	2,147
Tariff Class B1	747	1,694	1,748	1,802	1,856
Tariff Class B2	554	1,237	1,302	1,392	1,465
Tariff Class B3	4,589	10,437	10,830	11,154	11,486
Total	12,857	27,361	28,103	29,131	29,854

¹ 1 January 2010 to 30 June 2010 only.

Forecast customer numbers by Tariff Class (including customers in receipt of prudent discounts) are shown in Table 17.

Table 17
Forecast customer numbers by Tariff Class
(Average for year)

	2010 ¹	2010/11	2011/12	2012/13	2013/14
Tariff Class A1	76	76	75	74	74
Tariff Class A2	101	102	105	108	111
Tariff Class B1	1,225	1,255	1,295	1,335	1,375
Tariff Class B2	7,683	7,998	8,398	8,798	9,199
Tariff Class B3	601,025	613,354	631,063	649,973	669,332
Total	610,109	622,785	640,936	660,288	680,091

¹ 1 January 2010 to 30 June 2010 only.

7 FORECAST OPERATING EXPENDITURE [Rule 72(1)(e)]

Forecast Operating Expenditure over the Current Access Arrangement Period is shown in Table 18.

Table 18
Forecast Operating Expenditure
(\$ million, December 2009)

	2010 ¹	2010/11	2011/12	2012/13	2013/14
Network	12.553	27.471	28.229	28.402	27.852
Marketing	0.177	2.598	1.086	1.091	1.097
Corporate	3.983	7.966	7.966	7.966	7.966
Information Technology	2.791	5.956	6.167	5.839	6.210
Regulatory Cost	4.092	5.768	6.760	6.529	6.974
Unaccounted for Gas	4.869	10.362	10.643	11.032	11.306
Ancillary Reference Services	0.368	0.755	0.739	0.739	0.739
Total	28.834	60.875	61.589	61.599	62.144

¹ 1 January 2010 to 30 June 2010 only.

8 RATE OF RETURN [Rule 72(1)(g)]

Parameter values for the determination of a real, pre-tax Weighted Average Cost of Capital (WACC) as the rate of return for the Current Access Arrangement Period are shown in Table 19.

The details of how the WACC parameters have been estimated by the ERA are set out in the Return on Capital section of the Final Decision (pages 50–107) and in the Financial Model at Appendix 2 of the Final Decision (page 257). These documents are available on the ERA's website www.erawa.com.au.

Table 19
Parameter estimates for calculation of a real, pre-tax WACC

Parameter	Estimate value
Nominal Risk Free Rate	5.61%
Real Risk Free Rate	2.93%
Inflation Rate	2.60%
Debt Proportion	60%
Equity Proportion	40%
Cost of Debt: Debt Risk Premium	3.179%
Cost of Debt: Debt Issuing Cost	0.125%
Cost of Debt: Risk Margin	3.304%
Australian Market Risk Premium	6.00%
Equity Beta	0.80
Corporate Tax Rate	30%
Franking Credit	53%
Nominal Cost of Debt	8.91%
Real Cost of Debt	6.15%
Nominal Pre Tax Cost of Equity	12.12%
Real Pre Tax Cost of Equity	9.28%
Nominal After Tax Cost of Equity	10.41%
Real After Tax Cost of Equity	7.61%

The real, pre-tax Weighted Average Cost of Capital (WACC) rate of return determined by the ERA in its final decision using the parameters in Table 19 is 7.40%.

9 EFFICIENCY GAINS AND LOSSES [Rule 72(1)(i)]

Incentive mechanisms in respect of User Initiated Capital Expenditure and Non Capital Costs operated during the Earlier Access Arrangement Period.

User Initiated Capital Expenditure

An efficiency gain (or loss) in respect of User Initiated Capital Expenditure reflects the reduction (increase) in financing costs resulting from the difference between the actual and benchmark assumption for User Initiated Capital Expenditure in each calendar year. The financing cost is calculated by multiplying the Capital Expenditure saving by the WACC for the Earlier Access Arrangement Period.

Non-Capital Costs

An efficiency gain (or loss) in respect of Non Capital Costs is calculated for each calendar year by comparing the difference between the actual Non Capital Costs and benchmark Non Capital Costs. It is assumed that no further productivity gain is achieved between the penultimate and last years of the Earlier Access Arrangement Period.

The expenditure benchmarks have been adjusted to take into account the difference between forecast and actual growth by adjusting the original benchmarks on the basis of the difference between the actual number of connections in any year and the assumed number of connections for that year.

The efficiency gains achieved are detailed in Table 20. The carry-over of increments into Total Revenue for the Current Access Arrangement Period are shown in Table 24.

Table 20
Efficiency gains
(\$ million, December 2009)

	2005	2006	2007	2008
Non capital costs incentive				
Adjusted benchmark OPEX	43.867	43.394	42.615	41.806
Actual OPEX	39.300	40.791	40.712	37.608
Underspending	4.567	2.603	1.904	4.198
Efficiency gain/loss (-ve)	4.567	-1.964	-0.699	2.294
User initiated Capital Expenditure incentive				
Adjusted user initiated CAPEX benchmark	25.207	27.824	25.399	22.824
Adjusted user initiated CAPEX	26.331	31.286	28.252	22.978
Incremental gain	-1.124	-3.462	-2.853	-0.154
Financing gain/loss (-ve)	-0.076	-0.235	-0.193	-0.010

10 APPROACH TO SETTING REFERENCE TARIFFS [Rule 72(1)(j)]

10.1 Tariff Classes

Rule 94(1) requires that, for Tariff determination, customers for Reference Services be divided into Tariff Classes. “Tariff Class” is a new concept. It is defined, in Rule 69, as the customers for a Reference Service who constitute a Tariff Class under a Full Access Arrangement.

A Reference Service is provided to a User at each Delivery Point on the WAGN GDS. WAGN has, therefore, taken WAGN GDS Delivery Points as representing customers. By treating Delivery Points as customers, each customer is a customer in relation to only one Reference Service because only one Reference Service is provided at each Delivery Point.

About 609,000 customers are supplied with Gas from the WAGN GDS.

WAGN offers Reference Haulage Services, Reference Ancillary Services and Non-Reference Services.

The Reference Haulage Services are divided into five services with associated Tariff Classes. These are reference services A1, A2, B1, B2 and B3.

The first group of large use customers is provided with Service A1, and is a single Tariff Class – Tariff Class A1.

Reference Service A1 is supplied to customers (approximately 70) who require relatively large volumes of Gas (in excess of 35 TJ/year) supplied at high or medium pressures (above 300 kPa) and require Haulage Service through the high pressure and medium pressure parts of the WAGN GDS . These customers require User Specific Delivery Facilities – Service Pipes, regulators, and metering equipment – designed and constructed to deliver Gas into their customer specific plant and equipment. The User Specific Delivery Facilities must also be designed and constructed to accommodate the peak flows of 10 GJ/hour or more required by these customers, and to allow remote monitoring using Telemetry as required by the *Retail Market Rules*.

The second group of larger use customers (approximately 100) is provided with Service A2, and are a single Tariff Class – Tariff Class A2.

These customers require volumes of Gas in excess of 10 TJ/year but less than 35 TJ/year. These customers require Haulage Service through the high pressure and medium pressure parts of the WAGN GDS which is essentially the same as the Haulage Service required by other customers. However, they require Gas delivery into plant and equipment which is customer specific and, they must be provided with User Specific Delivery Facilities designed and constructed to deliver Gas into their customer specific plant and equipment. The User Specific Delivery Facilities must be designed and constructed to accommodate the peak flows of at most 10 GJ/hour which are required by these customers, and to allow remote monitoring using Telemetry as required by the *Retail Market Rules*.

The third group of customers (approximately 1,200) is provided with Service B1, and is a single Tariff Class – Tariff Class B1.

These customers require Haulage Service through the high pressure and medium pressure parts of the WAGN GDS which is essentially the same as the Haulage Service required by Tariff Class A1 and Tariff Class A2 customers. They also require Gas delivery into plant and equipment which is customer specific and, for this, they must be provided with User Specific Delivery Facilities designed and constructed to deliver Gas into their customer specific plant and equipment. The User Specific Delivery Facilities must be designed and constructed to accommodate the peak flows of at most 10 GJ/hour which are required by these customers. However, because their annual requirements do not exceed 10 TJ/year, these customers do not require remote monitoring, using Telemetry, of metering at Delivery Points.

The remainder of the customers (some 608,000) require relatively small volumes of Gas for commercial and residential use. They can be supplied from the high pressure, the medium pressure and the low pressure parts of the WAGN GDS, and require Haulage Service essentially the same as the Haulage Service required by Tariff Class A1, Tariff Class A2 and Tariff Class B1 customers. Their requirements for relatively small volumes at low pressures allow these customers to be supplied using Standard Delivery Facilities.

Around 7,500 of these 608,000 customers require larger volumes and gas deliveries at higher peak rates and are provided with Service B2, and are grouped together as a single Tariff Class – Tariff Class B2.

All of these customers can be supplied using up to 20 metres of Service Pipe, a Standard Pressure Regulator and a Standard 12 m³/hour meter.

The remainder of the small use customers (approximately 600,000 customers) are provided with Service B3, and can be grouped together as a single Tariff Class – Tariff Class B3. These customers can be supplied using up to 20 metres of Service Pipe, a Standard Pressure Regulator and a standard small use Meter rated at 6 to 8 m³/hour.

The grouping of customers into Tariff Classes which correspond to the existing structure of Reference Services can be carried out, as required by Rule 94(2), on an economically efficient basis and in a way which avoids unnecessary transaction costs.

10.2 Charging parameters for each Tariff Class

The Reference Tariff payable by the customers in each Tariff Class is to be determined in accordance with Rule 94(4). Each of the Reference Services provided using the WAGN GDS can be divided into a number of elements, and a charging parameter can be assigned to each of these elements. The Reference Services offered by WAGN, and the Tariff Classes, Reference Tariffs, service elements and charging parameters associated with each of these Reference Services, are set out in Table 21.

Table 21
WAGN GDS Reference Services, Tariff Classes, Reference Tariffs, service elements and charging parameters

Reference service Tariff Class Reference tariff	Service element	Charging parameter
A1	Use of distribution system capacity Haulage Haulage Provision of Service Pipe, regulators, metering and Telemetry	Standing Charge Demand Charge Usage Charge User specific Charge
A2	Use of distribution system capacity Haulage Provision of Service Pipe, regulators, metering and Telemetry	Standing Charge Usage Charge User specific Charge
B1	Use of distribution system capacity Haulage Provision of Service Pipe, regulators, and metering	Standing Charge Usage Charge User specific Charge
B2	Use of distribution system capacity Haulage	Standing Charge Usage Charge
B3	Use of distribution system capacity Haulage	Standing Charge Usage Charge

The structure of the Reference Tariff for each Reference Service applying in the Earlier Access Arrangement Period has been largely retained. The Reference Tariff for each Tariff Class has a standing Charge and a usage Charge. In each case, the usage charge has two blocks. In addition, Tariffs A1, A2 and B1 has a further charging parameter – a User specific Charge – which varies between customers in accordance with individual requirements for User Specific Delivery Facilities. Reference tariff A1 has a third charging parameter – a demand Charge – which is related to the distance from the nearest transmission pipeline, and is designed to avoid inefficient bypass of the WAGN GDS.

10.3 Change required by Rule 94

Rule 94 requires that Reference Tariffs be constructed in such a way that they provide proper signals for efficient investment in, and for efficient operation and use of, Distribution Pipelines.

Distribution Pipeline costs and, in particular, the costs of developing, operating and maintaining the WAGN GDS, are not closely related to the volume of Gas transported. Those costs vary with the capacity which is provided in the various parts of a Distribution Pipeline, and with the (very large) number of points at which end-users can connect to the system and take delivery of the Gas transported. Future requirements for capacity and connectivity, and not for additional volumes delivered, are the primary determinants of the distribution pipeline system long run marginal costs which are to be the basis of Reference Tariffs determined in accordance with Rule 94.

Accordingly, WAGN has determined, for each of the Reference Services provided using the WAGN GDS during the Current Access Arrangement Period, the incremental cost of connecting the forecast increase in the number of customers requiring the service. This incremental cost comprises the incremental capital costs (return and depreciation), and the incremental operating costs. The ratio of the incremental cost to the increase in service requirement (the product of the number of new connections and the system capacity required to support each connection), has been taken as the long run marginal cost of providing the Reference Service in question using the WAGN GDS.

This long run marginal cost is not directly related to volume. It is related to the change in number of connections to the WAGN GDS. Its economic focus is not the end-user of Gas, but a Prospective User of the Distribution Pipeline: it provides the correct signal to the Prospective User in terms of the efficient cost of an additional connection to the WAGN GDS.

WAGN has, therefore, sought to determine the standing Charge component of each Reference Tariff from the long run marginal cost of providing the corresponding Reference Service. The usage Charge has then been determined as the volume-related Charge which allows WAGN the opportunity to recover its Total Revenue.

The Reference Tariffs are set out in Table 22.

Table 22
WAGN GDS Reference Tariffs exclusive of GST¹

Tariff	Charging parameter		1 July 2011	1 July 2012	1 July 2013
A1	Standing Charge	\$/year	39,345.21	39,345.21	39,345.21
	Demand Charge				
	First 10 km	\$/GJ km	165.85	165.85	165.85
	Distance > 10 km	\$/GJ km	87.29	87.29	87.29
	Usage Charge				
	First 10 km	\$/GJ km	0.03518	0.03518	0.03518
	Distance > 10 km	\$/GJ km	0.01758	0.01758	0.01758
A2	Standing Charge	\$/year	21,781.57	21,781.57	21,781.57
	First 10TJ	\$/GJ	2.10	2.10	2.10
	Volume > 10TJ	\$/GJ	1.13	1.13	1.13
B1	Standing Charge	\$/year	1,092.92	1,092.92	1,092.92
	First 5TJ	\$/GJ	4.20	4.20	4.20
	Volume > 5TJ	\$/GJ	3.60	3.60	3.60
B2	Standing Charge	\$/year	270.46	270.46	270.46
	First 100GJ	\$/GJ	6.99	6.99	6.99
	Volume > 100GJ	\$/GJ	4.16	4.16	4.16
B3	Standing Charge	\$/year	55.21	55.21	55.21
	First 10GJ	\$/GJ	11.74	11.74	11.74
	Volume > 10GJ	\$/GJ	5.07	5.07	5.07

¹ All Tariffs are real, December 2009 dollars.

The Reference Tariffs in Table 22 satisfy the stand alone and avoidable cost tests of Rule 94(3), as shown in Table 23. They also allow WAGN to recover its Total Revenue over the Current Access Arrangement Period.

Table 23
Stand alone costs, avoidable costs, expected revenue from Reference Tariffs and Total Revenue

Tariff	Cost/Revenue	\$m¹	Test
A1	Standing alone cost	252.282	Satisfied
	Avoidable cost	5.644	Satisfied
	Expected revenue	21.073	
A2	Standing alone cost	369.025	Satisfied
	Avoidable cost	1.851	Satisfied
	Expected revenue	19.992	
B1	Standing alone cost	442.199	Satisfied
	Avoidable cost	4.067	Satisfied
	Expected revenue	32.264	
B2	Standing alone cost	454.410	Satisfied
	Avoidable cost	4.344	Satisfied
	Expected revenue	32.856	
B3	Standing alone cost	602.266	Satisfied
	Avoidable cost	66.201	Satisfied
	Expected revenue	426.972	
All Tariffs	Total revenue	547.993	Total revenue
	Expected revenue	547.993	recovered

¹ All values are real, December 2009 dollars.

11 REFERENCE TARIFF VARIATION MECHANISM [Rule 72(1)(k)]

Annexure B of the Access Arrangement provides for variation of the Reference Tariffs:

- in accordance with a formula; and
- as a result of a cost pass through for a defined event.

Annexure B is available on the ERA's website, www.erawa.com.au

11.1 Reference Tariff variation in accordance with formula

The Reference Tariffs set out in the preceding section of this Access Arrangement Information are all real, December 2009 dollar values. They must be periodically varied for the effects of inflation during the Current Access Arrangement Period if WAGN is to have the opportunity of recovering its efficiently incurred – nominal - costs of providing Reference Services.

The Access Arrangement for the WAGN GDS therefore includes a Reference Tariff Variation Mechanism which varies the Tariffs set out in Table 22 above for the effects of inflation from December 2009 to each of the dates on which varied Tariffs are to come into effect, being 1 July 2011, 1 July 2012, and 1 July 2013.

The variation of the Reference Tariffs for the effects of inflation is effected through the formulae set out in Annexure B of the Access Arrangement.

In addition, the formulae of the Reference Tariff Variation Mechanism allow WAGN to recover regulatory costs - the direct costs of action by agencies of government - which are beyond its control, and which could not be predicted with any certainty prior to the ERA's Final Decision.

11.2 Reference Tariff variation as a result of cost pass through

The Reference Tariff Variation Mechanism includes a scheme of Tariff variation for certain defined cost pass through events. Specific events which give rise to costs which can be recovered through Tariff variation for cost pass through are:

- WAGN incurs HHV Costs that constitute Conforming Operating Expenditure;
- WAGN incurs Physical Gate Point Costs that constitute Conforming Operating Expenditure;
- WAGN incurs Conforming Operating Expenditure as a result of a tax change or regulatory change;
- WAGN incurs Conforming Operating Expenditure as a result of any law that:
 - establishes, changes or regulates the operation of, an emissions trading scheme or mechanism that has as one of its objectives the management or reduction of greenhouse Gas emissions or concentrations and which includes the scheme set out in, or a scheme similar to, the scheme contemplated in the Carbon Pollution Reduction Scheme Bill 2009 (Cth) and its associated legislation and regulations, as promulgated, supplemented or amended from time to time;
 - imposes a fee, penalty or tax on greenhouse Gas emissions or concentrations; or
 - establishes, changes or regulates the operation of, any renewable energy scheme, including the scheme under the *Renewable Energy (Electricity) Act 2000* (Cth) and its associated legislation and regulations, as promulgated, supplemented or amended from time to time; and
- WAGN incurs conforming Operating Expenditure additional to the amount forecast for the purpose of determining Total Revenue for the Current Access Arrangement Period because there has been an unanticipated change in the price of Gas required to replace unaccounted for Gas.

12 INCENTIVE MECHANISM [Rule 72(1)(I)]

There is no incentive mechanism proposed for the Current Access Arrangement Period.

13 TOTAL REVENUE [Rule 72(1)(m)]

In accordance with Rule 76, the Total Revenue is to be determined using the “building block approach”:

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) if applicable – the estimated cost of corporate income tax for the year; 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).*

The building blocks of Total Revenue in each regulatory year of the Current Access Arrangement Period, and the Total Revenue in each year, are shown in Table 24.

Table 24
Total revenue
(\$ million, December 2009)

	2010 ¹	2010/11	2011/12	2012/13	2013/14
Return on Capital Base	28.118	59.622	61.213	63.291	65.094
Depreciation	10.948	23.723	25.861	27.963	30.007
Efficiency gains	1.842	1.438	0.292	1.837	1.142
AA2 Over Depreciation	-10.687				
Forecast Operating Expenditure	28.834	60.875	61.589	61.599	62.144
Total	59.123	145.657	148.954	154.690	158.387

¹ January 2010 to 30 June 2010 only.

No explicit estimate of tax has been made for the purpose of determining Total Revenue.

13.1 Allocation of the Total Revenue to Reference Services

Rule 93 governs the allocation of the Total Revenue to Reference Services. The Total Revenue is to be allocated between reference and other services in the ratio in which costs are allocated between reference and other services (Rule 93(1)).

WAGN does not provide other services using the WAGN GDS, and all Total Revenue during the Current Access Arrangement Period has been attributed to the provision of the Reference Services.

13.2 Meter lock, deregistration, disconnection and reconnection

The following are offered as Reference Services:

- apply Meter Lock – a Meter lock is applied to the Meter at a Delivery Point at which a User is entitled to take delivery of Gas under Service B3;
- remove Meter Lock – a Meter lock is removed from a Meter at a Delivery Point at which a User is entitled to take delivery of Gas under a Service B3;
- deregistration – effects permanent removal of a Meter from a Delivery Point and termination of the association of a User with the Delivery Point;
- disconnection – the supply of Gas at a Delivery Point at which a User is entitled to take delivery of Gas under Service B2 or Service B3 is disconnected; and
- reconnection – recommences the supply of Gas at the Delivery Point at which a User is entitled to take delivery of Gas under Service B2 or Service B3 and at which a Disconnection Service has previously been supplied.

13.3 Prudent discounts

Rule 96(1) allows a Service Provider to provide, in certain circumstances, a Reference Service to a particular User or class of Users at a discounted Reference Tariff, and to recover the cost of providing the discount from the provision of reference or other services in one or more future Access Arrangement Periods.

The Service Provider may only recover the cost of providing the discount if the discount is approved by the ERA. Before approving a discount – a prudent discount – the ERA must be satisfied that:

- the discount is necessary to respond to competition from other providers of Pipeline Services or from suppliers of energy from sources other than Gas, or is necessary to maintain efficient use of a Pipeline System; and
- provision of the discount is likely to lead to Reference Tariffs lower than would otherwise have been the case.

During the Initial Access Arrangement Period, WAGN offered discounts to certain Users of the WAGN GDS but received no compensation for foregone revenue. The discounts were approved by the ERA for the earlier Access Arrangement Period because the regulator was satisfied that the discounts were necessary to respond to competition, and that their provision would lead to lower Reference Tariffs. The cost of providing these discounts during the Earlier Access Arrangement Period was recovered via the Reference Tariffs set for that period.

WAGN is continuing to provide prudent discounts, and will recover the cost of their provision through the revised Reference Tariffs for the Current Access Arrangement

Period. The revenue expected to be received from Users in respect of Reference Services provided at discounted Reference Tariffs is shown in Table 25.

Table 25
Revenue from Reference Services provided at discounted Reference Tariffs
(\$ million, December 2009)

	2010 ¹	2010/11	2011/12	2012/13	2013/14
Revenue	1.613	3.272	3.286	3.250	3.161

¹ January 2010 to 30 June 2010 only.