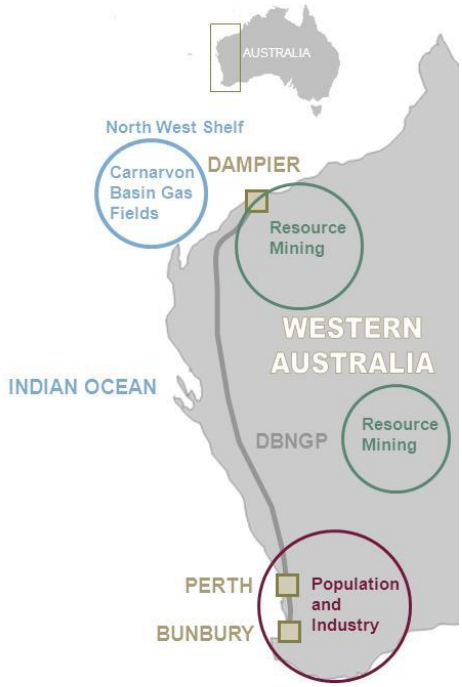
Proposed Revisions
DBNGP Access Arrangement

2016 – 2020 Access Arrangement Period
Access Arrangement Information

Date Submitted: 22 February 2016

DBP Transmission (DBP) is the owner and operator of the Dampier to Bunbury Natural Gas Pipeline (DBNGP), Western Australia's most important piece of energy infrastructure.

The DBNGP is WA's key gas transmission pipeline stretching almost 1600 kilometres and linking the gas fields located in the Carnarvon Basin off the Pilbara coast with population centres and industry in the south-west of the State



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1. INTRODUCTION

1.1 This document comprises the Access Arrangement Information (**AAI**) for the Current Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline pursuant to the requirements of the National Gas Access (WA) Act 2009 (**NGA**), the National Gas Access (Western Australia) Law (**NGL**) and National Gas Rules 2009 (**NGR**).

1.2 The AAI revises the access arrangement information for covered pipeline services on the DBNGP that was given effect from 18 October 2012 by the Economic Regulation Authority (**ERA**) pursuant to NGR 64 (**Prior Access Arrangement Information**).

1.3 The AAI was submitted to the ERA in accordance with NGR 43.

1.4 In accordance with NGR 42, this AAI contains the information that is necessary for Shippers and Prospective Shippers:

(a) to understand the background to the Access Arrangement; and

(b) to understand the basis and derivation of the various elements of the Access Arrangement.

1.5 The AAI relates to the Current Access Arrangement Period.

1.6 Table 1 outlines the provisions of the NGR and NGL that outline what must be included in an AAI (**NGR Requirements**) and where NGR Requirements are addressed.

Table 1: Requirements of the Access Arrangement Information

NGR	Requirement	AAI Section
r. 72(1)(a)(i)	Capital expenditure (by asset class) over the earlier access arrangement period.	3
r.72(1)(a)(ii)	Operating expenditure (by category) over the earlier access arrangement period.	4
r.72(1)(a)(iii) (A) / (B)	Usage of the pipeline over the earlier access arrangement period showing for a transmission pipeline including minimum, maximum and average demand for each receipt or delivery point and user numbers for each receipt or delivery point.	5
r. 72(1)(b)	How the capital base is arrived at and, if the access arrangement period commences at the end of an earlier access arrangement period, a demonstration of how the capital base increased or diminished over the previous access arrangement period.	6
r. 72(1)(c)(i)	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.	7
r. 72(1)(c)(ii)	A forecast of depreciation for the period including a demonstration of how the forecast is derived on the basis of the proposed depreciation method.	8
r. 72(1)(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.	10
r. 72(1)(e)	Forecast of operating expenditure over the access arrangement period and the basis on which the forecast has been derived.	11
r. 72(1)(f)	The key performance indicators to be used by the service provider to support expenditure to be incurred over the access arrangement period;	12
r. 72(1)(g)	The proposed return on equity, return on debt and allowed rate of return, for each regulatory year of the access arrangement period, in accordance with rule 87, including any departure from the methodologies set out in the rate of return guidelines and the reasons for that departure.	13
r.72(1)(ga)	The proposed formula (if any) that is to be applied in accordance with rule 87(12).	14
r. 72(1)(h)	The estimated cost of corporate income tax calculated in accordance with	14

NGR	Requirement	AAI Section
	rule 87A, including the proposed value of imputation credits referred to in that rule.	
r. 72(1)(i)	If an incentive mechanism operated for the previous access arrangement period—the proposed carry-over of increments for efficiency gains or decrements for efficiency losses in the previous access arrangement period and a demonstration of how allowance is to be made for any such increments or decrements.	N/A
r. 72(1)(j)(i)	The suggested basis of reference tariffs, including the method used to allocate costs and a demonstration of the relationship between costs and tariffs.	15
r. 72(1)(j)(ii)	A description of any pricing principles employed but not otherwise disclosed under this rule.	15
r. 72(1)(k)	the service provider's rationale for any proposed reference tariff variation mechanism.	15.1
r. 72(1)(l)	The service provider's rationale for any proposed incentive mechanism.	N/A
r. 72(1)(m)	The total revenue to be derived from pipeline services for each regulatory year of the access arrangement period.	17

2. BASIS ON WHICH FINANCIAL INFORMATION IS PROVIDED

2.1 Financial information is provided on a calendar year basis.

2.2 Unless otherwise stated, financial information is stated in this AAI in real terms with values expressed on a 31 December 2015 basis.

2.3 Where necessary to express financial values in dollar values of 31 December 2015, nominal financial values have been escalated at the rate of inflation as measured by the Consumer Price Index (All Groups, Weighted Average of Eight Capital Cities) shown in Table 2, or de-escalated at the expected rate of inflation shown in Table 3. Actual and forecast year on year percentage changes are provided below.

Table 2: Rate of inflation 2011-15

2011	2012	2013	2014	2015
3.10%	2.20%	2.75%	1.74	1.69

Source: Australian Bureau of Statistics

Expected rate of inflation

2.4 Inflation for each year from 2016 to 2020 is determined using the linear interpolation and Fischer equation approach outlined in the ERA's Rate of Return Guidelines and based on the 20 trading days before [redacted] Expected inflation for each year is shown in Table 3[1].

Table 3: Rate of inflation 2016-20

2016	2017	2018	2019	2020
1.91%	1.91%	1.91%	1.91%	1.91%

[1] It should be noted that the figures contained in *Table 3* are indicative only and have been calculated using the same methodology described above except that the 40 trading days up to 30 November 2015 have been used. These figures will be updated following the release of the Final Decision by the ERA to accurately apply the methodology outlined in paragraph 2.4 .

3. CONFORMING CAPITAL EXPENDITURE 2011-15

3.1 For the purposes of NGR 72(1)(a)(i), Conforming Capital Expenditure (by asset class) made over the Prior Access Arrangement Period is shown in Table 4.

Table 4: Conforming capital expenditure 2011-15 (Real $m at 31 December 2015)

	2011	2012	2013	2014	2015
Expansion/Enhancement/Extension					
Pipeline	36.21	10.73	0.00	0.00	0.00
Compression	27.29	3.72	0.00	0.00	0.00
Metering	0.00	0.00	0.00	0.00	0.00
Other	19.80	-1.80	0.00	0.00	0.05
other non-depreciable	0.00	0.00	0.00	0.00	0.00
BEP Lease	21.12	0.00	0.00	0.00	0.00
Sub total	**104.42**	**12.65**	**0.00**	**0.00**	**0.06**
Stay-in-business					
Pipeline	13.88	4.80	4.85	0.59	2.59
Compression	5.55	5.10	5.74	3.36	4.48
Metering	0.38	1.97	0.99	1.22	3.66
Other	37.15	10.02	12.19	8.34	13.37
Other non-depreciable	-0.02	-0.04	0.20	0.86	3.23
Sub total	**56.94**	**21.84**	**23.97**	**14.38**	**27.32**
Pipeline	50.09	15.52	4.85	0.59	2.59
Compression	32.84	8.82	5.74	3.36	4.48
Metering	0.38	1.97	0.99	1.22	3.66
Other	56.94	8.22	12.20	8.34	13.42
Other non-depreciable	-0.02	-0.04	0.20	0.86	3.23
BEP Lease	21.12	0.00	0.00	0.00	0.00
Total	**161.35**	**34.48**	**23.97**	**14.38**	**27.38**

4. OPERATING EXPENDITURE 2011-15

4.1 As required by NGR 72(1)(a)(ii), Operating Expenditure for the Prior Access Arrangement Period is provided in Table 5.

Table 5: Operating expenditure 2011 to 2015 (Real $m at 31 December 2015)

	2011	2012	2013	2014	2015
Costs other than fuel gas	80.85	73.24	69.59	72.32	65.66
Fuel Gas	13.41	9.92	10.11	16.04	19.43
Total	**94.26**	**83.15**	**79.69**	**88.36**	**85.09**

5. PIPELINE DEMAND

5.1 As required by NGR 72 (1)(a)(iii)(A), the following Tables contain the total minimum, maximum and average demand for inlet and outlet points used for the following Pipeline Services during the Prior Access Arrangement Period:

(a) Full Haul Services (Table 6);

(b) Part Haul (Forward Haul) Services (Table 7); and

(c) Back Haul Services (Table 8).

Table 6: Full haul demand 2011 to 2015

Full Haul	2011	2012	2013	2014	2015
Maximum	793.65	767.02	752.73	812.22	824.96
Average	630.52	631.80	631.31	643.22	652.56
Minimum	477.26	531.60	502.20	560.55	556.56

Table 7: Part haul demand 2011 to 2015

Part Haul	2011	2012	2013	2014	2015
Maximum	141.26	134.18	212.13	189.47	205.97
Average	110.31	106.47	130.66	116.88	147.83
Minimum	91.26	83.34	51.48	69.17	101.80

Table 8: Back haul demand 2011 to 2015

Back Haul	2011	2012	2013	2014	2015
Maximum	127.47	151.58	198.65	200.97	205.48
Average	105.17	128.96	146.48	178.37	167.76
Minimum	5.79	42.43	53.20	88.36	85.73

5.2 Information in the tables above is provided in an aggregated form. It is aggregated pursuant to NGR 43(2) as further disaggregated data would contain information which is sensitive, the public disclosure of which could cause undue harm to the legitimate business interest of the Operator, Shippers and/or Prospective Shippers.

5.3 As required by NGR 72(1)(a)(iii), Table 9 and Table 10 contains the following information :

(a) The number of Shippers for each Inlet Point (Table 9);

(b) The number of Shippers for all Outlet Points downstream of Compressor Station 9 (Table 10); and

(c) The number of Shippers for all Outlet Points to which Part Haul and Back Haul Services are provided (Table 10).

Table 9: Number of shippers by inlet point

Inlet/Receipt Point	ID	Aggregate Number of Shippers
DOMGAS Dampier Receipt	I1-01	29
MLV7 Interconnect	I1-03	24
Devil Creek	I1-04	26
Harriet	I1-02	33
Gorgon	I2-01	0
Macedon	I2-02	20
Mondarra Storage Facility	I8-01	6
Red Gully	I10-01	1

Table 10: Number of shippers by outlet

Outlet/Delivery Point	Aggregate Number of Shippers
Full Haul Points	17
Part Haul Points	29
Back Haul Points	22

5.4 Information contained in the Table 10 for Outlet Points is aggregated information. It is aggregated pursuant to NGR 43(2) as it contains elements of information which are sensitive information, the public disclosure of which could cause undue harm to the legitimate business interests of the Operator, a Shipper and/or Prospective Shippers.

6. OPENING CAPITAL BASE

6.1 In accordance with NGR 77(2) the Opening Capital Base for the Current Access Arrangement Period (i.e. the Opening Capital Base as at 1 January 2016) has been determined by the following formula:

(a) The Opening Capital Base as at the commencement of the Prior Access Arrangement Period adjusted, if at all, 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 Prior Access Arrangement Period (being the amounts in Table 4);

plus

(c) Any amounts to be added to the capital base under NGR 82, 84 or 86;

less:

(d) Depreciation over the Prior 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 Prior Access Arrangement Period; and

(f) The value of pipeline assets disposed of during the Prior Access Arrangement Period.

6.2 The Opening Capital Base at the commencement of the Prior Access Arrangement Period (**PAAP Opening Capital Base**) did not need amending for any expenditure incurred during the access arrangement period that preceded the Prior Access Arrangement Period because the PAAP Opening Capital Base was determined using only actual capital expenditure during that period (as opposed to forecast or estimated capital expenditure). Accordingly, there is no requirement to move any benefit or penalty associated with any difference between the estimated and actual capital expenditure.

6.3 The Opening Capital Base as at the commencement of the Prior Access Arrangement Period (i.e. 1 January 2011) was $3,780.68 million (Real dollar values as at 31 December 2015).

6.4 The Opening Capital Base for the Current Access Arrangement Period has not been amended for any amounts in any of the following categories because there are no amounts during the Prior Access Arrangement Period that fall within these categories:

(a) Amounts to be added to the Capital Base under NGR 82;

(b) Amounts to be added to the Capital Base under NGR 84 ; and

(c) Amounts to be added to the Capital Base under NGR 86.

6.5 Table 11 below demonstrates how the Operator has arrived at the Opening Capital Base for the Current Access Arrangement Period to deal with the criteria referred to in NGR 77(2)(b), (d), (e) & (f).

6.6 In relation to the calculation of depreciation over the Prior Access Arrangement Period, a correction has been made for over-depreciation from that period. This is to reflect the fact that certain assets will have been over-depreciated by the end of the Prior Access Arrangement Period due to the application of approved forecast depreciation and conforming capital expenditure inputs. The amount of the over-depreciation for these assets has been “written up” through a “positive” depreciation amount in the first year of the Current Access Arrangement Period. The positive depreciation entry returns the asset class and hence the capital base, to its correct value by the end of the first year of the Current Access Arrangement Period.

Table 11: Opening capital base (Real $m at 31 December 2015)

Year ending 31 Dec	2011	2012	2013	2014	2015
Capital base at 1 Jan	3,780.68	3,838.21	3,767.86	3,686.13	3,593.07
Plus					
Conforming capital	161.35	34.48	23.97	14.38	27.38
Less					
Redundant assets	0.00	0.00	0.00	0.00	0.00
Disposed assets	4.80	0.39	0.79	2.22	0.78
Depreciation	99.02	104.44	104.91	105.22	105.56
Capital base at 31 December	**3,838.21**	**3,767.86**	**3,686.13**	**3,593.07**	**3,514.11**
DBNGP assets					
Capital base at 1 Jan	3,750.93	3,809.16	3,739.94	3,659.40	3,567.56
Plus					
Conforming capital	161.35	34.48	23.97	14.38	27.38
Less					
Redundant assets	0.00	0.00	0.00	0.00	0.00
Disposed assets	4.80	0.39	0.79	2.22	0.78
Depreciation	98.32	103.32	103.73	104.00	104.34
Capital base at 31 December	**3,809.16**	**3,739.94**	**3,659.40**	**3,567.56**	**3,489.82**
Shipper assets					
Capital base at 1 Jan	29.75	29.05	27.92	26.73	25.51
Plus					
Conforming capital	0.00	0.00	0.00	0.00	0.00
Less					
Redundant assets	0.00	0.00	0.00	0.00	0.00
Disposed assets	0.00	0.00	0.00	0.00	0.00
Depreciation	0.70	1.13	1.19	1.22	1.22
Capital base at 31 December	**29.05**	**27.92**	**26.73**	**25.51**	**24.29**

7. PROJECTED CAPITAL BASE

7.1 The Projected Capital Base for the Current Access Arrangement Period is calculated in accordance with NGR 78 by way of the following formula:

(a) the Opening Capital Base for the Current Access Arrangement Period;
plus

(b) forecast Conforming Capital Expenditure for the Current Access Arrangement Period;
less

(c) forecast of depreciation for the Current Access Arrangement Period.

7.2 There is no forecast value of pipeline assets to be disposed of during the Current Access Arrangement Period which is to be deducted from the Projected Capital Base.

7.3 Applying the formula above, the Projected Capital Base for each year of the Current Access Arrangement Period is outlined in Table 12.

7.4 The derivation of the values for each element of the formula above for establishing the Projected Capital Base is explained in the sections 8 & 9 of the AAI.

Table 12: Projected capital base (Real $m at 31 December 2015)

Year	2016	2017	2018	2019	2020
Capital Base (as at 1 Jan)	3,514.11	3,442.42	3,382.41	3,297.21	3,230.42
Plus					
Forecast Conforming Capital Expenditure	25.68	41.82	17.59	30.12	39.09
Less					
Forecast Depreciation	102.69	101.82	102.79	96.91	87.93
Forecast Asset Disposals	0.00	0.00	0.00	0.00	0.00
Projected Capital Base	**3,437.10**	**3,382.41**	**3,297.21**	**3,230.42**	**3,181.58**
DBNGP assets					
Capital base at 1 Jan	3,489.82	3,416.87	3,357.57	3,273.07	3,206.98
Plus					
Forecast Conforming Capital Expenditure	25.68	41.82	17.59	30.12	39.09
Less					
Disposed assets	0.00	0.00	0.00	0.00	0.00
Depreciation	102.03	101.12	102.09	96.21	87.23
Capital base at 31 December	**3,413.47**	**3,357.57**	**3,273.07**	**3,206.98**	**3,158.83**
Shipper assets					
Capital base at 1 Jan	24.29	25.54	24.84	24.14	23.44
Plus					
Forecast Conforming Capital Expenditure	0.00	0.00	0.00	0.00	0.00
Less					
Disposed assets	0.00	0.00	0.00	0.00	0.00
Depreciation	0.66	0.70	0.70	0.70	0.70
Capital base at 31 December	**23.63**	**24.84**	**24.14**	**23.44**	**22.74**

8. FORECAST CONFORMING CAPITAL EXPENDITURE

8.1 Forecast Conforming Capital Expenditure for the Current Access Arrangement Period is summarised in Table 13

Table 13: Forecast conforming capital expenditure 2016-2020 (Real $m at 31 December 2015)

Year	2016	2017	2018	2019	2020
Expansion/Enhancement/Extension					
Pipeline	0.00	17.88	0.00	10.58	14.03
Compression	2.38	2.10	0.00	0.00	0.00
Metering	0.00	0.00	0.00	0.00	0.00
Other	0.00	0.00	0.00	0.00	0.00
other non-depreciable	0.00	0.00	0.00	0.00	0.00
Sub total	**2.38**	**19.99**	**0.00**	**10.58**	**14.03**
Stay-in-business					
Pipeline	3.68	2.49	1.64	5.38	7.65
Compression	13.62	14.01	12.50	11.75	11.73
Metering	3.60	2.68	0.85	0.65	3.14
Other	2.40	2.65	2.60	1.76	2.55
Other non-depreciable	0.00	0.00	0.00	0.00	0.00
Sub total	**23.30**	**21.83**	**17.59**	**19.54**	**25.06**
Pipeline	3.68	20.37	1.64	15.96	21.67
Compression	16.01	16.11	12.50	11.75	11.73
Metering	3.60	2.68	0.85	0.65	3.14
Other	2.40	2.65	2.60	1.76	2.55
Other non-depreciable	0.00	0.00	0.00	0.00	0.00
Total	**25.68**	**41.82**	**17.59**	**30.12**	**39.09**

8.2 The Operator's forecast Conforming Capital Expenditure for the Access Arrangement Period is based on the need to ensure the Operator:

(a) maintains and improves the safety of pipeline services;

(b) maintains the integrity of pipeline services;

(c) complies with the regulatory obligations or requirements applicable to the DBNGP; and/or

(d) maintains its capacity to meet levels of demand for pipeline services existing at the time the capital expenditure is forecast to be incurred (as distinct from projected demand that is dependent on an expansion of pipeline capacity) . In this regard, the forecast demand is outlined in section 10 of this AAI.

8.3 The forecast amounts of expenditure for the Access Arrangement Period are the minimum amounts the Operator considers are required to meet these obligations. They are based on the outcomes of the Operator's business planning and budgeting process.

9. FORECAST DEPRECIATION

9.1 A separate depreciation schedule has been determined for 5 classes of physical assets that form the DBNGP, these asset classes are provided in Table 14.

Table 14: Asset categories and asset lives

Asset Category	Asset life (years)
Pipeline	70
Compression	30
Metering	50
BEP Lease	57
Other	30

9.2 The Operator proposes to apply the asset categories provided in Table 14 to forecast conforming capital expenditure over the Current Access Arrangement Period.

9.3 The depreciation schedule has been designed:

(a) so that reference tariffs will vary, over time, in a way that promotes efficient growth in the market for reference services;

(b) so that each asset or group of assets is depreciated over the economic life of that asset or group of assets;

(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;

(d) so that (subject to the rules about capital redundancy), an asset is depreciated only once (i.e. 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 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.

9.4 The depreciation on each class of assets for the periods 1999 to 2004, 2005 to 2010 and 2011 to 2015 was the depreciation used in the determination of the reference tariff applicable during each of these periods, subject to the correction for over-depreciation for the Opening Capital Base for the Current Access Arrangement Period.

9.5 The depreciation, on the initial Capital Base as at 1 January 2000 and on Conforming Capital Expenditure made from 2000 to 2015, is determined using a straight line method with the following assumptions as to asset lives:

(a) In the case of the initial Capital Base as at 1 January 2000 – using the remaining asset lives for the following four asset classes as follows:

(i) Pipeline assets – 54.50 years;

(ii) Compression assets – 19.34 years;

(iii) Meter station assets – 39.98 years;

(iv) Other assets – 16.85 years; and

(b) In the case of Conforming Capital Expenditure made from 2000 to 2015 – using lives in each class of asset as shown in Table 14.

9.6 The depreciation for the Current Access Arrangement Period on forecast Conforming Capital Expenditure for that period has been determined using the straight line method with the lives in each class of asset shown in Table 14.

9.7 Table 15 shows the depreciation schedule for each class of assets comprising the Capital Base. It sets out the basis on which the pipeline assets constituting the capital base are to be depreciated for the purpose of determining the Reference Tariff.

Table 15: Depreciation schedule 2016 to 2020 (Real $m at 31 December 2015)

Year ending 31 December	2016	2017	2018	2019	2020
Pipeline assets	58.22	58.28	58.57	58.59	58.82
Compression assets	34.18	34.71	35.25	29.24	19.96
Metering assets	1.02	1.13	1.18	1.20	1.21
Other depreciable assets	8.24	6.64	6.72	6.81	6.87
BEP Lease	0.37	0.37	0.37	0.37	0.37
Total	**102.03**	**101.12**	**102.09**	**96.21**	**87.23**

9.8 A further, but separate adjustment is to be made to the amount of depreciation on the Projected Capital Base for each regulatory year of the Current Access Arrangement Period. This adjustment is required to be made as a result of:

(a) the requirement in the NGR to adopt a post-tax nominal approach to the calculation of the Total Revenue in each regulatory year; and

(b) adopting the current cost accounting approach to accounting for the capital base and using that approach in the PTRM, which requires an adjustment to be made to avoid double counting for the effect of inflation.

9.9 NGR 89(1)(d) provides that the depreciation criteria should be designed so that an asset is depreciated only once (i.e. 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)).

9.10 The depreciation schedule for the projected capital base as shown in Table 15 above does not address the part of the criteria in NGR 89(1)(d) requiring the adjustment for inflation. However, instead, the Operator has accounted for this part of the criteria in the calculation of the Total Revenue – see the line item in Table 21 named “Less inflationary gains on capital base”.

9.11 Accordingly, the depreciation schedule for the purposes of NGR 88 is to be construed as being both the information in Table 15 above and the line item in Table 21 named “Less inflationary gains on capital base”.

10. FORECAST PIPELINE CAPACITY

10.1 Table 16 provides the Capacity Forecast from 2016 to 2020.

Table 16: Capacity Forecast (TJ/day)

	2016	2017	2018	2019	2020
Total Full Haul	725.94	715.49	713.99	711.87	711.87
Total Part Haul	254.92	254.62	254.32	254.02	253.72
Total Back Haul	227.74	229.36	229.36	229.36	229.36

10.2 Capacity Forecast is based on actual contracted capacity as of August 2014, plus anticipated new contracted firm capacity during the Current Access Arrangement Period, and minus anticipated relinquishment of contracted capacity by shippers during that same period.

10.3 Table 17 provides the Pipeline Capacity[2] from 2016 to 2020.

Table 17: Pipeline Capacity (TJ/day)

	2016	2017	2018	2019	2020
Full Haul (TJ/day)	845	845	845	845	845

10.4 The Pipeline Capacity on the DBNGP is determined based on the following assumptions:

(a) For delivery of Full Haul pipeline services, the gas composition is as follows:

(i) Higher Heating Value – 37.0MJ/m3;

(ii) Wobbe Index - 46.5MJ/m3 ;

(iii) the percentage content of Inert Gases of no greater than 6.39%;

(iv) no LPG content;

(b) the ambient conditions on the DBNGP from Compressor Station 1 to Compressor Station 9 are average conditions for the month of January;

(c) gas is being delivered for receipt into the DBNGP at existing inlet points;

(d) the designed inlet pressure at the inlet point known as I1-01 is 8MPa; and

(e) all compressor units are operating.

10.5 Table 18 outlines the Throughput Forecast from 2016 to 2020.

Table 18: Throughput Forecast

	2016	2017	2018	2019	2020
Total Full Haul	620.22	610.57	614.23	618.02	621.61
Total Part Haul	109.39	119.44	124.44	124.44	124.39
Total Back Haul	187.35	187.34	187.34	187.34	187.35

10.6 Throughput Forecast is based on a combination of current usage levels, contracted capacity, historical throughput growth rates, publicly available information and shipper provided throughput forecasts.

[2] *Pipeline Capacity means the capacity to deliver firm pipeline services to any outlet point immediately downstream of compressor station 9 on the DBNGP.*

11. FORECAST OPERATING EXPENDITURE

11.1 Forecast operating expenditure for 2016 to 2020 is shown in Table 19.

Table 19: Forecast operating expenditure 2016-20 (Real $m at 31 December 2015)

	2016	2017	2018	2019	2020
Wages & salaries	29.47	30.05	30.64	31.24	31.86
Non-field expenses	15.30	14.92	15.00	15.45	16.00
Field Expenses	13.44	15.36	16.93	13.15	13.06
Government charges	7.30	7.30	7.30	7.30	7.30
Reactive maintenance	1.40	1.40	1.40	1.40	1.40
Fuel gas	36.57	35.07	35.51	36.01	36.56
Total	**103.48**	**104.10**	**106.78**	**104.56**	**106.16**

11.2 The Operator's forecast Operating Expenditure for the Access Arrangement Period is based on the following:

(a) the outcomes of its business planning and budgeting process; and

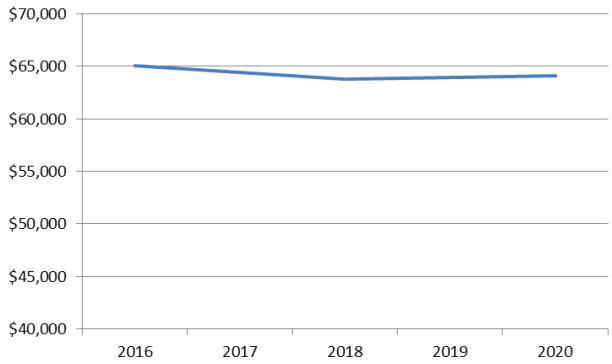
(b) the need for the forecast to be that which would be incurred by a prudent service provider acting efficiently in accordance with accepted industry practice, to achieve the lowest sustainable cost of delivering pipeline services.

12. KEY PERFORMANCE INDICATOR

12.1 Rule 72(1)(f) requires that the access arrangement information to contain the key performance indicators to be used by the service provider to support expenditure to be incurred over the Current Access Arrangement Period.

12.2 Figure 1 contains a key performance indicator that the Operator proposes to use to support expenditure to be incurred over the Current Access Arrangement Period. That indicator is calculated by dividing all operating expenditure for a regulatory year (excluding fuel gas, GEA/turbine overhauls and reactive maintenance categories) by the total energy delivered each regulatory year. Figure 1 contains the results in each regulatory year during the Prior Access Arrangement Period (using actual operating expenditure and actual total energy delivered) and the Current Access Arrangement Period (using forecast operating expenditure and forecast total energy to be delivered).

Figure 1: Key performance indicator (operating expenditure / total energy delivered)



Source: Operator

12.3 DBP maintains it is not appropriate to use this KPI to assess the efficiency of the DBNGP by comparing it with other pipelines within Australia.

13. RATE OF RETURN

Box 1: ACT Appeals

On Monday 22 February 2016, this version of the Access Arrangement Information was submitted to the ERA pursuant to Rule 60(1) of the NGR, being the end of the revision period set by the ERA in making its Draft Decision on the Access Arrangement Proposal. On 18 February 2016, the Operator became aware that the Australian Competition Tribunal's decisions in relation to the ACT Proceedings numbered ACT 1-8 of 2015 were due to be handed down on Friday 26 February 2016 (ACT Decision).

The ACT Decision, at least in so far as it concerns rate of return issues, is likely to:

- ***consider a range of issues of a similar nature to those which may arise before the ERA in its assessment of the Access Arrangement Proposal, particularly bearing in mind that the ERA's approach to date on rate of return is largely consistent with the approach of the AER that is being challenged in the east coast merits reviews and notwithstanding that DBP has advanced different submissions and evidence compared with the east coast businesses;***
- ***provide greater clarity on the interpretation of the rate of return provisions of the NGR and the Access Arrangement Proposal; and***
- ***have an impact on the ERA's assessment of the Operator's submissions on rate of return in the Access Arrangement Proposal (and other matters).***

The Operator wrote to the ERA on 18 February seeking an extension of the revision period to allow the Operator to consider the impact that the ACT Decision may have on the interpretation of the rate of return provisions of the NGR and the Access Arrangement Proposal.

On 19 February 2016, the ERA declined the request.

This Access Arrangement Proposal (and accompanying submissions in support of this proposal) has therefore been submitted without the assistance of the ACT Decision.

The Operator reserves its rights to make further submissions to the ERA in accordance with Rule 59(5)(iii) of the NGR.

13.1 In accordance with NGR 72(1)(g) and, (ga), this section describes:

(a) the Operator's return on equity, return on debt and the Rate of Return, for each regulatory year of the Access Arrangement Period, in accordance with NGR 87;

(b) the departures made by the Operator from the methodologies set out in the Guidelines and the reasons for each departure; and

(c) the formula that is to be applied, in accordance with NGR 87(12), to vary the return on debt.

Allowed Rate of Return

13.2 Subject to paragraph 13.3, the Operator's return on equity, return on debt and the Rate of Return, for each regulatory year of the Access Arrangement Period, in accordance with NGR 87, is outlined in Table 20.

13.3 As outlined in section 11 of the Current Access Arrangement, the return on debt will be, or will potentially be, different for different regulatory years in the Access Arrangement Period as a result of applying the Reference Tariff Variation mechanism known as the Hybrid Approach. Because the resultant variation to the return on debt that arises from applying this mechanism will not be known in advance, it is not possible to outline at the commencement of the Access Arrangement Period what the return on debt will be for each regulatory year of the Access Arrangement Period.

Table 20: Rate of Return

Element	Value
Return on Equity (nominal post-tax)	10.84%
Return on Debt (nominal pre-tax)	5.59%
Gearing Ratio (Debt:Equity)	60:40
Nominal Vanilla WACC / Post Tax Nominal WACC	7.69%

Departures from the Guidelines

13.4 The Guidelines form the primary basis on which the Rate of Return has been estimated.

13.5 However, there are some additional methodologies that have been used by the Operator to estimate the Rate of Return and also some departures from the methodologies outlined in the Guidelines as a result of either or both the Operator adopting a different interpretation of the relevant provisions of the NGL and/or the ERA having modified its methodology on a particular matter since the Guidelines. These are outlined in the table below.

Table 21: Level of consistency with the Guidelines

Matter in Guideline	DBP position vis-à-vis Guidelines	Comments
Nominal post tax model	Consistent	
WACC Approach	Consistent	
Definition of Benchmark efficient entity	Consistent	
Approach to Gearing	Consistent	
Methodology for setting term of risk-free rate of return	Departure	Set at the 10-year CGS for equity and the 5-year BBSW for debt
Methodology for estimating Inflation	Consistent	
Methodology for estimating Gamma	Minor departure	Use the best dividend drop-off study rather than a range of said studies
Return on equity	Departure	Consideration of different models in a formal framework, resulting in the application of a different model from that used in the Guidelines
Return on debt	Minor departure	Follow the ATCO Final Decision revised bond yield approach (the DRP Approach), but use different hedging and debt-raising costs and add a new issue premium
Methodology for annual update of Return on Debt	Consistent	Follow the ATCO Final Decision by use capex weights, as outlined in Section 11.7 of the Access Arrangement.

Overarching matters

13.6 Consistent with the Guidelines, in estimating the Rate of Return, the Operator has:

(a) used a model similar to the AER's post tax revenue model as the basis for using a nominal vanilla rate of return;

(b) adopted a WACC approach expressed as follows:

$$WACC_{vanilla} = E(r_e)\frac{E}{V} + E(r_d)\frac{D}{V}$$

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); and

D/V is the proportion of debt in total financing.

(c) adopted the definition of benchmark efficient entity as proposed by the ERA in the Guidelines - being an efficient "pure-play" regulated gas network business operating within Australia without parental ownership[1], with a similar degree of risk as that which applies to the service provider in respect of the provision of reference services;

(d) used the same gearing level as in the Guidelines - so the value E/V in the WACC formula above is 40% and the value D/V in the above formula is 60%;

(e) for the purposes of estimating the Debt Risk Premium, assumed that the benchmark credit rating is to encompass the BBB-/BBB/BBB+ credit band.

13.7 In setting the inflation rate, a forecast of 1.91 percent has been adopted for each year of the Current Access Arrangement period.

13.8 For gamma, a value of 0.25 has been adopted.

13.9 For the term of the risk-free rate:

(a) the five-year BBSW in respect of debt has been used, as this is the most appropriate rate given the Hybrid Approach used to update the cost of debt for each regulatory year of the access arrangement period;

(b) the ten-year CGS risk-free rate has been used for the return on equity, as it best reflects the totality of long-run risks faced by equity holders.

Return on Equity

13.10 The Operator's methodology for determining the return on equity that will contribute to the achievement of the allowed rate of return objective as required by Rule 87(5) NGR departs from the methodology in the ERA's Guidelines. The central issue in that regard relates to the problem of bias which is inherent in certain models, with consequential impacts upon the outputs produced by such models, including the ERA's chosen model for estimating the return on equity, the Sharpe-Lintner CAPM.

13.11 The ERA's methodology:

(a) does not make a proper assessment of its approach to that issue and has based its conclusions on superficial reasoning and irrelevant evidence, while ignoring relevant evidence.

(b) in at least one respect, fails to make a proper application of the evidence which it has itself produced in relation to the identification or quantification of bias within its chosen model.

13.12 The Operator's methodology firstly involves the use of a "model adequacy test" and an alternative test (suggested by the ERA) – a cross validation test - to consider the outputs of models giving rise

[1] *Guidelines, para 58.*

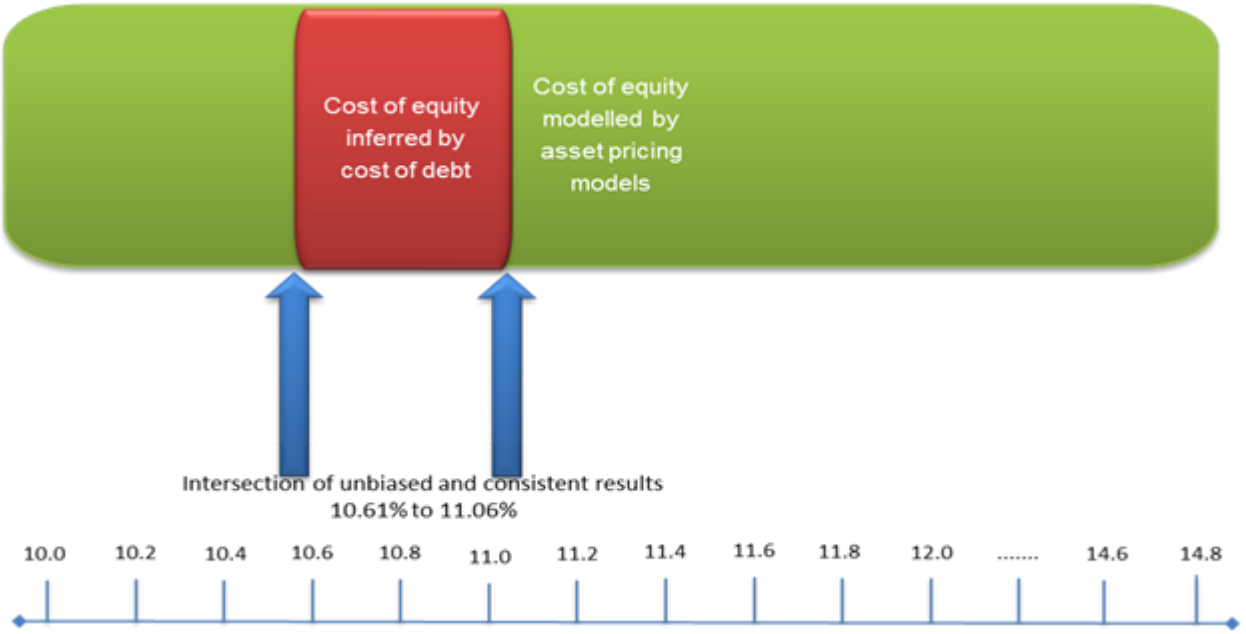
to a range of unbiased outcomes; model results that neither systematically overstate or systematically understate actual returns. The cross validation testing supports DBP's findings from the application of its model adequacy test.

13.13 The updated range of unbiased outcomes from DBP's model adequacy test is shown in the table below.

	beta	Risk free rate	Market risk premium	Return on equity
25th percentile estimate of betastar	1.00	2.87	7.03*	9.9
99th percentile estimate of beta	1.70	2.87	7.03	14.82

*Source: Operator analysis * note that this is equivalent to the ERA's use of a 7.6 percent MRP given that it measures the MRP from the five-year risk-free rate and the Operator uses the ten-year rate. The difference between the two rates during the relevant observation period was 57 bps.*

13.14 The Operator then considers information from the cost of debt via a consistency test, which serves to narrow the range of unbiased outcomes to a set which is unbiased and consistent. This gives rise to the range shown in the figure below.



13.15 The mid-point of the range of unbiased and consistent results is 10.84 percent, and the Operator has chosen this as the best estimate of the return on equity.

13.16 There are further reasons why the Operator, in adopting the above methodology, has departed from the ERA's methodology for estimating return on equity as outlined in the Guidelines:

(a) The ERA originally motivated its choice for the range of beta in the Guidelines (Guidelines Explanatory Statement, p. 190.) of 0.5 to 0.7 by noting that the 95 percent confidence interval around its estimates of beta was between 0.3 and 0.72, and then, using regulatory judgment, chose the upper end of that range in order to account for the downward bias of the SL-CAPM. However, according to the ERA's own calculations for the period until October 2015, the 95 percent confidence interval shifted from 0.3 to 0.72, to 0.41 to 0.81. Notwithstanding the change in the limits of the range, the ERA still has chosen a beta of 0.7 when applying the methodology from the Guidelines to the DBNGP. While the ERA continues to use regulatory judgment to choose the value of beta and its reason for exercising such judgement is to adjust for the potential downwards bias of the SL-CAPM, the ERA has shifted, therefore, from choosing a point which is two basis points below the top of the 95th confidence interval, to one which is 11 basis points below this upper limit. If a value

for beta were to be set at two basis points below the upper limit of the new range, it would be 0.79.

(b) The ERA adjusts beta for the downward bias using the "theoretical implications" of the Black CAPM, but does not apply actual empirical information from the Black CAPM because estimates of the zero-beta premium (the element of the Black CAPM which captures the downward bias) are varied. However, even if one takes the smallest value of the zero-beta premium that the ERA itself calculates and thus adopts the most conservative view of downward bias in the SL-CAPM informed by the Black CAPM, joining this with the ERA's current median estimate of beta results in a bias-adjusted beta of 0.88, not 0.7

(c) There is evidence available as at the date of preparation of this Access Arrangement Information that reveals that the underlying data informing beta has undergone a "structural change" (ie – the older data do not reflect the new reality), most conservatively sometime around 2012. The most recent estimate of beta using three years of data, without making any adjustment for downward bias of low beta stocks, is 0.95.

13.17 Allowing only for these three things, and without changing any other aspect of the ERA's methodology for return on equity set out in the Guidelines, produces the return on equity estimates set out in the table below.

Beta evidence	Beta estimate	Return on equity estimate
ERA current approach	0.7	7.62%
2bps below top of new range of confidence interval	0.79	8.30%
ERA betastar	0.88	8.99%
Shorter estimation period	0.95	9.52%

Source: Operator analysis. Note that all estimates assume an MRP of 7.6 percent and a risk-free rate of 2.3 percent. That is, the five-year risk-free rate and the market risk premium relative to the five-year risk-free rate.

Return on debt

13.18 In respect of the return on debt, the Operator has departed from the Guidelines but aligned with the ERA's methodology set out in the Final Decision for the ATCO Gas Distribution system access arrangement, with the exception of:

- The cost of debt raising and hedging, which Operator considers has been under-estimated by the ERA by around nine basis points.
- The new issue premium, which has not been included in the ERA's own methodology.
- The Operator has used capital expenditure weighting for the different tranches of debt (forward-looking only), which results in a difference of principle but, since Operator has no forecast capital investment above the threshold, proposed for the implementation of capex weight during the Current Access Arrangement Period, no difference in practical outcomes.

13.19 The Operator, while departing from the Guidelines, has accepted the substantive elements of the ERA's approach to the return on debt as set out in the Final Decision for the ATCO Gas Distribution system access arrangement, being its hybrid approach, its approach to estimating the debt risk premium and its choice of the relevant risk-free rate.

13.20 Bringing all this together gives a cost of debt estimate of 5.59%, being:

- The five year BBSW of 2.46 percent.
- The ten-year debt risk premium of 253.57 bps
- Hedging costs of 14.8 bps.
- Debt raising costs of 17.84 bps.
- A new issue premium of 27 bps.

14. ESTIMATED COST OF CORPORATE INCOME TAX

14.1 In accordance with NGR72(1)(h), this section outlines the estimated cost of corporate income tax calculated in accordance with NGR87A, including the proposed value of imputation credits referred to in NGR 87A.

14.2 The Operator's estimated cost of corporate income tax 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

(i) 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;

(ii) r_t is the expected statutory income tax rate for that regulatory year as determined by the AER; and

(iii) γ is the value of imputation credits.

14.3 The value of imputation credits is 25% (0.25)

14.4 The result of applying the formula above is outlined in the Table 20.

Table 20: Estimated cost of corporate income tax (Real $m 31 December 2015)

	2016	2017	2018	2019	2020
Gross estimated cost of corporate income tax	34.48	33.64	33.25	34.26	35.62
Less					
Imputation Credits	8.62	8.41	8.31	8.57	8.90
Estimated cost of corporate income tax	25.86	25.23	24.94	25.70	26.71

15. TARIFF SETTING APPROACH

15.1 Subject to paragraph 15.3, each of the Reference Tariffs (being the T1 Tariff, P1 Tariff and B1 Tariff) has been designed to recover from Shippers using each of the Reference Services that portion of the Total Revenue that reflects:

(a) those costs (including capital costs) which are directly attributable to the provision of the Reference Services; and

(b) a share of those costs (including capital costs) which are attributable to provision of the Reference Services jointly with Pipeline Services provided to other Shippers with contractual rights existing prior to the commencement of this Current Access Arrangement Period and other Pipeline Services which the Operator considers are reasonably foreseeable to be offered during the Access Arrangement Period.

15.2 In determining the Reference Tariffs for the T1 Service, P1 Service and B1 Service, costs have been allocated to the Services provided to Shippers with Access Contracts entered into prior to the commencement of the Current Access Arrangement Period, as if those Shippers had been provided with the respective Reference Services.

15.3 In accordance with section 12 of the Access Arrangement, the Operator and Nominees will not benefit, through increased revenue, from each amount of Funded Capital Expenditure that has been rolled into the Capital Base. So, subject to clause 12.4(b) of the Current Access Arrangement, the portion of the Total Revenue for each year of the Current Access Arrangement that equals the sum of the return on the Funded Capital Expenditure and the depreciation of the Funded Capital Expenditure will not be allocated to any pipeline service, including the Reference Tariffs.

15.4 The Reference Tariffs are designed:

(a) to generate from the provision of the Reference Services the portion of Total Revenue attributable to provision of the Reference Services;

(b) to generate from a Shipper or class of Shippers to which a Reference Service is provided, the portion of Total Revenue referable to providing the Reference Service to the Particular Shipper or class of Shippers; and

(c) consistently with the revenue and pricing principles in the NGL.

15.5 For the purpose of recovery of costs from Shippers and of earning the portion of Total Revenue attributable to the Reference Services, each of the Reference Tariffs are divided into a two part tariff structure:

(a) Capacity Reservation Tariff; and

(b) Commodity Tariff.

Capacity Reservation Tariff

15.6 The Capacity Reservation Tariff for each Reference Service, when applied to determine the Capacity Reservation Charge, recovers from each Reference Service Shipper a proportion of the return and depreciation on, and a proportion of the operating expenditure incurred in operating and maintaining, the DBNGP other than those assets that make up the DBNGP for which a capital contribution has been made by a Shipper.

15.7 In accordance with the terms of the Access Contract Terms and Conditions for each Reference Service:

(a) the Shipper must pay a Capacity Reservation Charge for each Gas Day during the Period of Supply regardless of whether the Shipper provides Gas at any Inlet Point and regardless of whether the Shipper takes Gas at any Outlet Point; and

(b) the Capacity Reservation Charge is the aggregate of the Shipper's Contracted Capacity for the Reference Service at each Outlet Point multiplied by the Capacity Reservation Tariff.

15.8 The Capacity Reservation Tariff is a number of dollars per GJ of Contracted Capacity for the T1 Service and a number of dollars per GJ of Contracted Capacity per kilometre for each of the P1 Service and B1 Service and is:

(a) as at the commencement of the Access Arrangement Period - as specified in the Current Access Arrangement;

(b) otherwise varied in accordance with clause 11 of the Current Access Arrangement.

Commodity Tariff

15.9 The Commodity Tariff for each Reference Service, when applied to determine the Commodity Charge, recovers from the Shipper a proportion of the forecast Operating Expenditure (including the cost of the System Use Gas used on the DBNGP).

15.10 In accordance with the terms of the Access Contract Terms and Conditions, the Shipper must pay a Commodity Charge for each Gas Day during the Period of Supply by calculating the multiple of the Commodity Tariff and each GJ of Gas Delivered to the Shipper up to Contracted Capacity for the relevant Service at all Outlet Points by the Operator on that Gas Day.

15.11 The Commodity Tariff is:

(a) for the T1 Service, a number of dollars per GJ of gas actually Delivered to any Outlet Point on the DBNGP; and

(b) for the P1 Service and B1 Service, a number of dollars per GJ of gas actually Delivered to any Outlet Point per kilometre.

Other tariff matters

15.12 The Shipper using a Reference Service is required to pay Other Charges as required by the Access Contract Terms and Conditions.

15.13 The Capacity Reservation Charge, the Commodity Charge and all Other Charges, as determined in accordance with the Access Contract Terms and Conditions, are exclusive of GST.

16. REFERENCE TARIFF VARIATION MECHANISM RATIONALE

16.1 NGR 92 requires inclusion of a Reference Tariff Variation Mechanism to be included in the Access Arrangement.

16.2 NGR 97 provides that a Reference Tariff Variation Mechanism may provide for variation of a Reference Tariff:

(a) in accordance with a schedule of fixed tariffs;

(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).

16.3 The Current Access Arrangement contains a Reference Tariff Variation Mechanism that is made up of 5 parts – see section 11 of the Access Arrangement:

(a) CPI Formula Variation;

(b) Tax Changes Variation;

(c) New Costs Pass Through Variation;

(d) Revenue cap adjustment; and

(e) Trailing Average Cost of Debt Annual Update.

16.4 NGR 92(2) requires each that the Reference Tariff Variation Mechanism to be designed to equalise (in terms of present values):

(a) forecast revenue from Reference Services over the Access Arrangement Period; and

(b) the portion of Total Revenue allocated to Reference Services for the Access Arrangement Period.

16.5 NGR 97 also sets out criteria that the Reference Tariff Variation Mechanism must meet. They are that the Reference Tariff Variation Mechanism has regard to:

(a) the need for efficient tariff structures;

(b) the possible effects of the reference tariff variation mechanism on the administrative costs of the regulator, the service provider, and users or potential users;

(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 any other relevant factor.

17. TOTAL REVENUE

17.1 The Total Revenue for each regulatory year of the Access Arrangement Period has been calculated using the building block approach described in NGR 76.

17.2 This means that the Total Revenue for each regulatory year of the Access Arrangement Period has been calculated as the sum of:

(a) A return on the projected capital base for the year;

(b) Depreciation on the projected capital base for the year (inclusive of a correction for the inflationary gains in the projected capital base);

(c) the estimated cost of corporate income tax for the year; and

(d) A forecast of operational expenditure for the year.

17.3 The Total Revenue for each regulatory year of the Access Arrangement Period is included in Table 21.

Table 21: Total Revenue (Real $m at 31 December 2015)

	2016	2017	2018	2019	2020
Return on capital base	263.34	257.83	253.36	246.98	241.99
Depreciation	102.03	101.12	102.09	96.21	87.23
Less inflationary gains on RAB	-65.41	-64.04	-62.93	-61.34	-60.11
Correction for over-depreciation	-3.41	0.00	0.00	0.00	0.00
Estimated cost of corporate income tax	25.86	25.23	24.94	25.70	26.71
Operating expenditure	103.48	104.10	106.78	104.56	106.16
Total	425.90	424.25	424.24	412.10	401.99

17.4 It should be noted that the table above includes two line items used in the calculation of the Total Revenue that are not expressly identified as separate “building blocks” in NGR 76. They are:

(a) Correction for over-depreciation – this forms part the building block of the return on the project capital base

(b) Less inflationary gains on the capital base – this forms part of the building block of depreciation on the projected capital base.

18. DEFINITIONS

18.1 Unless the context otherwise requires, terms used in capitals in this AAI have:

(a) the meaning given in this section 18;

(b) if no meaning is given in this section 18, the meaning given in the Current Access Arrangement or the Access Contract Terms and Conditions; and

(c) if no meaning is given in this section 18 or in the Current Access Arrangement or the Access Contract Terms and Conditions, the meaning given in the NGA.

18.2 In this AAI:

AAI has the meaning given in paragraph 1.1.

AER means the Australian Energy Regulator.

Guidelines means the rate of return guidelines made and published by the ERA, in accordance with NGR 87(13), on 16 December 2013.

KPI means key performance indicator in this AAI.

Pipeline Capacity means the capacity to deliver pipeline services immediately downstream of Compressor Station 9 on the DBNGP, based on the assumptions outlined in paragraph 10.2.

Prior Access Arrangement Information has the meaning given to it in paragraph 1.2 of this AAI.

Prior Access Arrangement Period means the period to which the Prior Access Arrangement applied as indicated in Table 4 of this AAI.

Rate of Return means the Allowed Rate of Return and for the purpose of the Access Arrangement Period, is the rate identified in Section 13 of this AAI, required for the purposes of establishing the Total Revenue and as determined under NGR 87.

Reference Tariff means the reference tariff for each Reference Service and as outlined in the Current Access Arrangement, and as varied in accordance with the Current Access Arrangement.

Total Revenue means the total revenue as determined for each regulatory year of the Access Arrangement Period by applying the formula in NGR 76.

WACC means the weighted average cost of capital approach, adopting the formula in Section 13.