

# Aurizon Network's 2016 Access Undertaking

**FY2017** Revenue Adjustment Amounts - Explanatory Memorandum Revised as at 5 December 2017

26 September 2017



# **Table of Contents**

1	Executive Summary	3
2	Summary of Revenue Adjustment Amounts Method	4
3	Revenue Adjustment Amounts for FY2017	6
4	Adjustments to Allowable Revenue	9
5	Total Actual Revenue	14
	A – Total Actual Revenue and Adjusted Allowable Revenue (Schedule ion)	15

## 1 Executive Summary

#### 1.1 Introduction

As required by Clause 4.3 of Schedule F of Aurizon Network's 2016 Access Undertaking, approved by the Queensland Competition Authority (QCA) on 11 October 2016 (2016AU), Aurizon Network Pty Ltd (Aurizon Network) has calculated the Revenue Adjustment Amounts for the Financial Year (FY) ending on 30 June 2017. This submission provides details of the methodology, data and assumptions used to calculate those Revenue Adjustment Amounts.

Capitalised terms in this submission have the meaning given to those terms in the 2016AU, unless otherwise defined.

Under the 2016AU, Aurizon Network is required to recover from (or return to) Access Holders, Revenue Adjustment Amounts, comprising the difference between revenue earned (Total Actual Revenue (TAR)) and revenue allowed (Adjusted Allowable Revenue (AR)) for the relevant Reference Tariff components for each coal system in the Central Queensland Coal Network (CQCN).

#### 1.2 Revenue Adjustment Amounts

The Revenue Adjustment Amounts include the:

- AT<sub>2-4</sub> Reference Tariff components for each of the Blackwater, Goonyella, Moura, Newlands and Goonyella to Abbot Point (**GAPE**) Systems; and
- AT<sub>5</sub> Reference Tariff components for the Blackwater and Goonyella Systems.

This submission provides Aurizon Network's calculations of:

- net returns due to Access Holders for the Moura, Newlands and GAPE Systems; and
- net recovery due from Access Holders for the Goonyella and Blackwater Systems.

The total of the Revenue Adjustment Amounts for FY2017, relative to the FY2017 Adjusted Allowable Revenue, represents a net recovery from Access Holders of \$39.1 million. The Revenue Adjustment Amounts are summarised in Table 1 below:

Table 1 FY2017 Revenue Adjustment Amounts

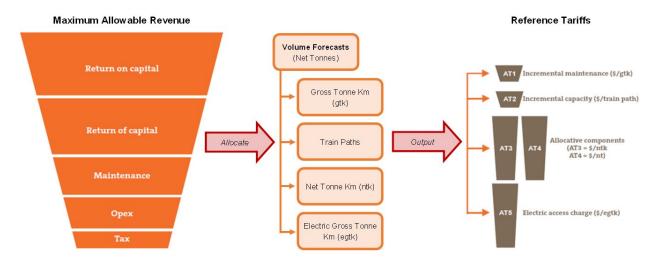
System	AT <sub>2-4</sub> \$m	AT₅ \$m	Total \$m
Blackwater	19.1	8.2	27.4
Goonyella	12.4	4.2	16.6
Moura	(0.6)	n/a	(0.6)
Newlands	(3.7)	n/a	(3.7)
GAPE	(0.5)	n/a	(0.5)
Total	26.7	12.4	39.1

The amounts in the tables within this submission are approximate to one decimal point. Actual amounts may differ slightly due to rounding.

## 2 Summary of Revenue Adjustment Amounts Method

#### 2.1 Regulatory provisions

Aurizon Network's regulated revenues are derived using a regulatory 'building blocks' approach where capital and operating costs are aggregated into a Maximum Allowable Revenue (**MAR**) for each coal system. The approved MAR is then translated into Reference Tariffs based on approved volume forecasts. Allowable Revenue is the amount recoverable through the AT<sub>2-4</sub> and AT<sub>5</sub> Reference Tariffs, which form the basis of Aurizon Network's Revenue Adjustment Amounts.

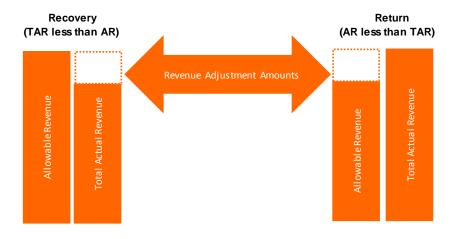


Schedule F of the 2016AU provides:

- the basis on which Aurizon Network recovers revenue from Access Holders, i.e. primarily from Reference Tariffs charged for trains operated; and
- the guidelines on Take or Pay, Adjustment Charges and Revenue Adjustment Amounts to enable Aurizon Network to earn the Allowable Revenue in each coal system in the same or subsequent years.

#### 2.2 Revenue Adjustment Amounts Framework

Aurizon Network is required to recover from (or return to) Access Holders the Revenue Adjustment Amounts, being the difference between revenue earned (TAR) and revenue allowed (AR) for the relevant Reference Tariff components.



There are seven Revenue Adjustment Amounts, the 'non-electric' revenue cap  $(AT_{2-4})$  for each of the five coal systems plus two 'electric' revenue caps  $(AT_5)$ , one each for the Blackwater System and the Goonyella System.

The following must be addressed by Aurizon Network for each coal system by way of a submission to the QCA by 30 September following the relevant financial year:



Within the AT<sub>2-4</sub> and AT<sub>5</sub> Revenue Adjustment Amounts, there are eight areas of adjustments to Allowable Revenue provided for under Clause 4.3 (c) of Schedule F of the 2016AU:

- Maintenance Cost Index (MCI);
- Consumer Price Index (CPI);
- Electricity connection costs;
- Audit costs:
- Condition Based Assessment costs;
- Ground Penetrating Radar Measurement costs;
- Rebates adjustments; and
- Costs relating to compliance with the Access Undertaking.

These adjustments are detailed in Section 4 of this submission.

#### 2.3 Financial Models

Detailed financial models have been prepared and provided to the QCA in support of this FY2017 Revenue Adjustment Amounts submission. The models include:

- Billing data by haul;
- The rebates model;
- The Take or Pay models; and
- Information and calculations relating to the adjustments to Allowable Revenue in respect of clause 4.3 (c) (i) to (viii) of Schedule F.

As the financial models and billing data contain specific information on individual Train Services and billing information which is specific to individual Access Holders, Aurizon Network claims confidentiality over the financial models. Outputs from the models are summarised in this submission.

## 3 Revenue Adjustment Amounts for FY2017

#### 3.1 Revenue Adjustment Amounts

Revenue Adjustment Amounts are caused primarily by actual throughput varying from the throughput parameters underlying the regulatory system forecasts which form a key input in the determination of Reference Tariffs.

In FY2017, 210.8 million net tonnes were railed across the CQCN. Railings were materially impacted by Tropical Cyclone Debbie and the associated flooding. Tonnages in the Goonyella, Blackwater, Moura and GAPE Systems were all below the system forecast net tonnes approved by the QCA as part of the 2016AU. The Newlands System is the only coal system that outperformed regulatory tonnage forecast despite the flooding caused by Tropical Cyclone Debbie in March and April 2017.

A summary of regulatory forecast net tonnes and Gross Tonne Kilometers (GTKs) by system compared with actual net tonnes and GTKs is provided in Tables 2 and 3 below.

**Table 2 FY2017 Net Tonnes Performance** 

System	Forecast Tonnages (million NT)	Actual Tonnages (million NT)	Variance %
Blackwater	67.8	62.1	(8%)
Goonyella	115.6	111.1	(4%)
Moura	12.5	12.2	(2%)
Newlands	9.0	12.0	34%
GAPE	17.0	13.3	(22%)
Total	222.0	210.8	(5%)

Table 3 FY2017 GTK's Performance

System	Forecast GTK (billion)	Actual GTK (billion)	Variance %
Blackwater	38.7	35.0	(10%)
Goonyella	37.6	36.1	(4%)
Moura	3.2	3.3	2%
Newlands	2.2	2.6	20%
GAPE	9.9	7.6	(23%)
Total	91.7	84.7	(8%)

The Goonyella System actual GTKs were 4% below the system forecast but Take or Pay did not trigger in the Goonyella System due to the actual GTKs being greater than the system forecast GTKs, when adjusted for Aurizon Network Cause and Force Majeure cancellations. The result was an under recovery of AT<sub>2-4</sub> Allowable Revenue in the Goonyella System.

The Moura and Newlands Systems recorded GTKs which were higher than the system forecast, by 2% and 20% respectively, resulting in an over-recovery of AT<sub>2-4</sub> revenue.

The GAPE and Blackwater Systems recorded GTKs which were lower than the system forecast by 23% and 10% respectively, resulting in an under-recovery of AT<sub>2-4</sub> revenues and triggering of Take or Pay in both systems. In the GAPE system, the Take or Pay amount recovered the full extent of the AT<sub>2-4</sub> Allowable Revenue. The Take or Pay in the Blackwater system did not cap. This was primarily due to reductions in the contracted Take or Pay due to the number of Network cause and Force Majeure cancellations following Cyclone Debbie.

Goonyella and Blackwater recorded Total Actual AT<sub>5</sub> revenue below Allowable Revenue driven by the lower volumes resulting in an under-recovery of AT<sub>5</sub> revenue.

The total of the Revenue Adjustment Amounts for FY2017, represents a net recovery from Access Holders of \$39.1 million, comprising a recovery of \$26.7 million for  $AT_{2-4}$  and a recovery of \$12.4 million for  $AT_5$ , varying between returns and recoveries at a system level.

The Revenue Adjustment Amounts for 'non-electric' and 'electric' are reconciled to the AR and TAR as outlined below in Tables 4 and 5:

Table 4 Revenue Adjustment Amounts - AT2-4

System	Adjusted Allowable Revenue \$m	Total Actual Revenue \$m	Revenue Adjustment Amounts \$m
Blackwater	417.9	398.8	19.1
Goonyella	318.6	306.2	12.4
Moura	39.2	39.8	(0.6)
Newlands	15.6	19.4	(3.7)
GAPE	131.3	131.8	(0.5)
Total	922.6	895.9	26.7

Table 5 Revenue Adjustment Amounts – AT5

System	Adjusted Allowable Revenue \$m	Total Actual Revenue \$m	Revenue Adjustment Amounts \$m
Blackwater	97.5	89.3	8.2
Goonyella	64.9	60.7	4.2
Total	162.3	149.9	12.4

A comparison of the FY2017 Revenue Adjustment Amounts (excluding cost of capital adjustments) with previous submissions made by Aurizon Network in the period 2007 to 2016 is set out in Table 6:

Table 6 Total Revenue Adjustment Amounts – FY2007 to FY2017

Year	AT₂-₄ Adjustment \$m	AT₅ Adjustment \$m	Total Adjustment \$m
2007	15.7	10.1	25.8
2008	27.8	15.8	43.6
2009	4.6	28.3	32.9
2010	(6.1)	(6.1) 6.0	
2011	19.2	30.0	49.2
2012	2.7	11.2	13.9
2013	28.2	28.2 10.9	
2014	15.5 (8.5)		7.0
2015	(25.3)	(2.3)	(27.6)
2016	(23.3)	2.7	(20.6)
2017	26.7	12.4	39.1

## 4 Adjustments to Allowable Revenue

Clause 4.3 (c) of Schedule F details eight adjustments that are made to the approved Allowable Revenue as part of the Revenue Adjustment Amounts calculation.

• Clause 4.3(c)(i) • Adjustment to reflect the difference between **MCI** actual and forecast MCI on approved maintenance costs • Clause 4.3(c)(ii) · Adjustment to reflect the difference between CPI actual and forecast CPI on approved operating · Clause 4.3(c)(iii) Connection to an electricity transmission or distribution network Adjustment to reflect the difference between actual and forecast electricity connection costs Clause 4.3(c)(iv) · Adjustment to reflect required audit costs not **Audit costs** already recoverable elsewhere in the Underťaking Clause 4.3(c)(v) **Condition Based** · Adjustment to reflect Condition Based Assessment costs not already recoverable Assessment costs elsewhere in the Undertaking Clause 4.3(c)(vi) Ground Penetrating Radar Measurement costs · Adjustment to reflect Ground Penetrating Radar Measurement costs not already recoverable elsewhere in the Undertaking · Clause 4.3(c)(vii) Rebate adjustment · Adjustment to reflect the difference between actual and forecast payments of rebates Clause 4.3(c)(viii) Compliance with the Adjustment to reflect Undertaking compliance Undertaking costs costs not already recoverable elsewhere in the Undertaking

# 4.1 Maintenance Costs Index (MCI)

With respect to Clause 4.3 (c) (i) of Schedule F, Aurizon Network has calculated a net return due to Access Holders of 3.5m for AT<sub>2-4</sub> and 0.2m for AT<sub>5.</sub> Overall, the actual MCI for the year was less than the forecast MCI used for determining FY2017 Reference Tariffs. The methodology used for determining the MCI adjustment is detailed below.

The MCI is a weighted index of a number of separate indexes. The weightings used in calculating Reference Tariffs for FY2017 were as follows:

	Fuel	Accommodation	Consumables	Labour	СРІ
Index Weights	2.3%	2.6%	33.5%	50.6%	11.0%

Each of the separate indexes were forecasted in the 2016AU for the purposes of determining Reference Tariffs for FY2017.The approved indexes were as follows:

	Fuel	Accommodation	Consumables	Labour	СРІ	Weighted Index
FY12 Dollars Index Weights- Forecast	96.6%	100.8%	108.8%	114.5%	112.3%	111.6%

The actual MCI indexes have been calculated with detailed workings provided to the QCA as part of this submission. The actual indexes were as follows:

	Fuel	Accommodation	Consumables	Labour	СРІ	Weighted Index
FY12 Dollars Index Weights- Actual	79.7%	109.7%	107.1%	112.4%	110.4%	109.6%

The actual weighted MCI was below the forecast MCI.

The adjustments to Allowable Revenue from applying the respective forecast and actual MCI to the maintenance costs included in the Allowable Revenue for FY2017 are outlined below in tables 7 and 8:

Table 7 Allowable Revenue Maintenance costs allowance adjusted for MCI

	AT <sub>2-4</sub> \$m	AT <sub>5</sub> \$m	Total \$m
Maintenance costs allowance in Allowable Revenue	196.3	10.7	207.0
Adjusted Maintenance costs allowance	192.8	10.5	203.3
Net return to Access Holders	(3.5)	(0.2)	(3.7)

Table 8 MCI Adjustment to Allowable Revenue by System

	AT <sub>2-4</sub> \$m	AT₅ \$m	Total \$m	
Blackwater	(1.6)	(0.1)	(1.6)	
Goonyella	(1.4)	(0.1)	(1.5)	
Moura	(0.2)	n/a	(0.2)	
Newlands	(0.1)	n/a	(0.1)	
GAPE	(0.3)	n/a	(0.3)	
Net return to Access Holders	(3.5)	(0.2)	(3.7)	

#### 4.2 Consumer Price Index (CPI)

With respect to Clause 4.3 (c) (ii) of Schedule F, Aurizon Network has calculated a net return due to Access Holders of 2.1m for AT<sub>2-4</sub>. Overall, the actual CPI for the year was less than the forecast CPI used for determining FY2017 Reference Tariffs. The methodology for determining the CPI adjustment is set out below.

Forecast CPI figures for the Brisbane 'All Groups' were taken from the mid-point of the Reserve Bank of Australia's forecast CPI band. The following table shows the actual versus forecast CPI:

	Forecast CPI used for FY2017 tariffs	Actual CPI
FY2017	112.3%	110.4%

The adjustments to Allowable Revenue from applying the respective forecast and actual CPI to the operating costs included in the Allowable Revenue for FY2017 are outlined below in tables 9 and 10:

Table 9 Allowable Revenue Operating costs allowance adjusted for CPI

	AT <sub>2-4</sub> \$m	AT₅ \$m	Total \$m
Operating costs allowance in Allowable Revenue	129.4	0.7	130.1
Adjusted Operating costs allowance	127.3	0.7	128.0
Net return to Access Holders	(2.1)	0.0	(2.1)

Table 10 CPI Adjustment to Allowable Revenue by System

	AT <sub>2-4</sub> \$m	AT₅ \$m	Total \$m
Blackwater	(0.7)	(0.0)	(0.7)
Goonyella	(1.0)	(0.0)	(1.0)
Moura	(0.1)	n/a	(0.1)
Newlands	(0.1)	n/a	(0.1)
GAPE	(0.2)	n/a	(0.2)
Net return to Access Holders	(2.1)	(0.0)	(2.1)

## 4.3 Electricity Connection costs

With respect to Clause 4.3 (c) (iii) of Schedule F, Aurizon Network has calculated a net return due to Access Holders of 0.5m for AT<sub>5</sub> represented by the difference between:

- the amounts paid to Powerlink Queensland and Ergon Energy for the connection of Aurizon Network's electric infrastructure to their respective electricity networks; and
- the forecast costs used for the purposes of determining the AT<sub>5</sub> Reference Tariff components for FY2017.

#### 4.4 Audit costs

With respect to Clause 4.3 (c) (iv) of Schedule F, Aurizon Network has calculated a net recovery due from Access Holders of \$42k for AT<sub>2-4</sub> in respect of audits required under the 2016AU by the QCA, represented by the difference between:

- the amounts paid in respect of audits required under the Undertaking by the QCA in FY2017; and
- the amounts included in the operating costs allowance for the purposes of determining Reference Tariffs for FY2017.

A breakdown of the costs incurred is provided to the QCA with this submission.

#### 4.5 Conditions Based Assessment costs

With respect to Clause 4.3 (c) (v) of Schedule F, Aurizon Network has calculated that there is no Revenue Adjustment Amount in respect of Condition Based Assessment costs for FY2017.

Aurizon Network did not incur any costs in respect of Conditions Based Assessment that were not recoverable elsewhere in the QCA approved Allowable Revenue allowance for FY2017.

#### 4.6 Ground Penetrating Radar Measurement costs

With respect to Clause 4.3 (c) (vi) of Schedule F, Aurizon Network has not included any costs in respect of FY2017 ground penetrating radar measurement within this submission. However Aurizon Network reserve its rights to include FY2017 ground penetrating radar measurement costs within a future regulatory cost recovery process.

#### 4.7 Rebate Adjustment

With respect to Clause 4.3 (c) (vii) of Schedule F, Aurizon Network has calculated a net return due to Access Holders of \$2.1m for  $AT_{2-4}$  and a net return due to Access Holders of \$0.1m for  $AT_5$  represented by the difference between:

- the amounts paid in respect of rebates for FY2017; and
- the amounts of forecast payments used for the purpose of determining the relevant Reference Tariffs for FY2017.

There are no rebate arrangements covering mines in the Moura and GAPE Systems or electric infrastructure in the Blackwater System.

A breakdown of the rebates paid and the rebate calculation models are provided to the QCA with this submission.

#### 4.8 Compliance Costs

With respect to Clause 4.3 (c) (viii) of Schedule F, Aurizon Network has calculated a net recovery due from Access Holders of \$0.1m for AT<sub>2-4</sub> in respect of compliance costs that were not included in the 2016AU allowances.

The costs incurred were to complete the 2016AU reporting requirements for a confidential information register and a train services entitlements reconciliation report.

A breakdown of the compliance costs incurred is provided to the QCA with this submission.

#### 4.9 Adjusted Allowable Revenues Summary

The Adjusted Allowable Revenues are reconciled to the Allowable Revenue as outlined below in Tables 11 and 12:

Table 11 Adjusted Allowable Revenues - AT<sub>2-4</sub>

System	AT <sub>2-4</sub> Allowable Revenue \$m	MCI Adjustment \$m	CPI Adjustment \$m	Rebate Adjustment \$m	Other Adjustments \$m	Adjusted AT <sub>2-4</sub> Allowable Revenue \$m
Blackwater	421.5	(1.6)	(0.7)	(1.4)	0.0	417.9
Goonyella	322.1	(1.4)	(1.0)	(1.3)	0.1	318.6
Moura	39.4	(0.2)	(0.1)	-	0.0	39.2
Newlands	15.2	(0.1)	(0.1)	0.6	0.0	15.6
GAPE	131.8	(0.3)	(0.2)	-	0.0	131.3
Total	930.1	(3.5)	(2.1)	(2.1)	0.1	922.6

Table 12 Adjusted Allowable Revenues – AT<sub>5</sub>

System	AT₅ Allowable Revenue \$m	MCI Adjustment \$m	CPI Adjustment \$m	Rebate Adjustment \$m	Connection Costs \$m	Adjusted AT₅ Allowable Revenue \$m
Blackwater	97.8	(0.1)	(0.0)	-	(0.2)	97.5
Goonyella	65.3	(0.1)	(0.0)	(0.1)	(0.3)	64.9
Total	163.1	(0.2)	(0.0)	(0.1)	(0.5)	162.3

#### 5 Total Actual Revenue

#### 5.1 Adjustments to Access Charges

The Access Charges payable by Access Holders for individual Train Services are set out in detail in the financial model that is provided to the QCA with this submission.

Aurizon Network confirms that:

- Access Charges are per amounts invoiced by Aurizon Network to Access Holders;
- Allocations for Cross System Train Services between the Blackwater and Goonyella Systems are in accordance with clause 4.2(b) of Schedule F;
- Access revenues in the GAPE and Blackwater Systems include Take or Pay. Take or Pay has been determined in accordance with the relevant Standard Access Agreements for each Access Holder and has been agreed with and billed to the relevant Access Holders. A copy of the Take or Pay model is provided to the QCA with this submission; and
- No Relinquishment Fees or Transfer Fees were collected, or were entitled to be collected, during FY2017. A schedule detailing contractual transfers is provided to the QCA with this submission.

The invoiced access charges are reconciled to the TARs as outlined below in Tables 13 and 14:

Table 13 Total Actual Revenue AT<sub>2-4</sub>

System	AT <sub>2-4</sub> Billed excl. Cross System \$m	Cross System , Take or Pay and Relinquishment Fees \$m	Total Actual Revenue AT₂-₄ \$m
Blackwater	377.3	21.5	398.8
Goonyella	292.7	13.4	306.2
Moura	39.8	0.0	39.8
Newlands	19.4	0.0	19.4
GAPE	100.2	31.6	131.8
Total	829.4	66.5	895.9

Table 14 Total Actual Revenue AT<sub>5</sub>

System	AT₅ Billed excl. Cross System \$m					
Blackwater	82.2	7.0	89.3			
Goonyella	59.5	1.2	60.7			
Total	141.7	8.3	149.9			

# Attachment A – Total Actual Revenue and Adjusted Allowable Revenue (Schedule for Publication)

Attachment A
Revenue Adjustment Amounts
2016/17

	Tota	al Actual Revenue		Adjusted Allowable Revenue				Revenue Adjustment			
		TAR Adjustments					AR Adjus	tments			
AT <sub>2-4</sub>	Billing models (excl Cross System Traffic)	Adjustments (inc Cross System, Take or Pay, Transfer fees)	Total Actual Revenue		AR per Schedule F	MCI adjustment Maintenance Costs	CPI adjustment Operating Costs	Other AR Adjustments	Rebate Adjustments	Adjusted AR	Total Recovery / (Return)
Blackwater Goonyella Moura Newlands GAPE	377,308,675 292,741,139 39,755,404 19,360,911 100,224,091	21,492,040 13,413,421 - - 31,588,359	398,800,715 306,154,560 39,755,404 19,360,911 131,812,450	Blackwater Goonyella Moura Newlands GAPE	421,516,050 322,143,947 39,433,219 15,225,192 131,812,450	(1,577,204) (1,351,472) (173,568) (110,648) (263,685)	(973,331) (114,015) (135,071)	42,972 61,553 7,210 8,542 13,589	(1,373,623) (1,325,943) - 631,366	417,928,686 318,554,754 39,152,846 15,619,382 131,347,476	19,127,971 12,400,194 (602,558) (3,741,529) (464,974)
	829,390,220	66,493,821	895,884,041	L	930,130,858	(3,476,577)	(2,116,803)	133,867	(2,068,200)	922,603,145	26,719,104
AT <sub>5</sub>	Billing models (excl Cross System Traffic)	Adjustments (inc Cross System, Take or Pay, Transfer fees)	Total Actual Revenue		AR per Schedule F	MCI adjustment Maintenance Costs	CPI adjustment Operating Costs	Connection Charges Adjustment	Rebate Adjustments	Adjusted AR	Total Recovery / (Return)
Blackwater Goonyella Moura Newlands GAPE	82,228,274 59,451,059	7,022,382 1,246,356	89,250,656 60,697,414	Blackwater Goonyella Moura Newlands GAPE	97,770,934 65,329,042	(68,603) (118,539)	, , ,	(223,126) (255,960)	- (85,313)	97,473,602 64,862,685	8,222,946 4,165,271
GAPE											

Total Revenue Adjustment Amount Under-recovery (for 2016/17)

39,107,321