



FY2023 Revenue Adjustment Amounts - Explanatory Memorandum

October 2023



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1. Introduction

1.1 Overview

Aurizon Network Pty Ltd (**Aurizon Network**) has calculated the Revenue Adjustment Amounts for the Financial Year ending on 30 June 2023 (**FY2023**) based on the provisions of its 2017 Access Undertaking (**UT5**).

Under UT5, Aurizon Network is required to recover from (or return to) Access Holders the Revenue Adjustment Amounts, comprising the difference between revenue earned (**Total Actual Revenue**) and revenue allowed (**Adjusted Allowable Revenue**) for the relevant Reference Tariff components, for each Coal System in the Central Queensland Coal Network (**CQCN**).

The total FY2023 Revenue Adjustment Amounts for the CQCN, relative to the FY2023 Adjusted Allowable Revenue, represents a net recovery from Access Holders of \$33.1 million (**m**). This submission provides details of the methodology, data and assumptions used to calculate the Revenue Adjustment Amounts.

1.2 Revenue Adjustment Amounts

Aurizon Network submits for QCA approval, its Revenue Adjustment Amounts for FY2023. The Revenue Adjustment Amounts are calculated for:

- AT₂₋₄ Reference Tariff components for each of the Coal Systems; Blackwater, Goonyella, Moura, Newlands, and the Goonyella to Abbot Point Expansion (**GAPE**); and
- AT₅ Reference Tariff components for the Blackwater and Goonyella Systems.

The total of the Revenue Adjustment Amounts for FY2023, relative to the FY2023 Adjusted Allowable Revenue, represents a net recovery from Access Holders of \$9.9m for AT₂₋₄ and a net recovery from Access Holders of \$23.1m for AT₅. The Revenue Adjustment Amounts are summarised in Table 1.

Table 1. FY2023 Revenue Adjustment Amounts

Coal System	AT ₂₋₄	AT ₅	Total
Blackwater	7.8	9.1	16.9
Goonyella	2.5	14.1	16.6
Moura	3.2	-	3.2
Newlands	(4.1)	-	(4.1)
GAPE	0.6	-	0.6
Total	9.9	23.1	33.1

Note: The amounts in the table provided within this submission are expressed in \$ million (except where stated) and are rounded to one decimal point. Actual amounts may differ slightly due to rounding. Amounts to the nearest dollar are detailed in Appendix A of this submission.

1.3 Form of Submission

This submission outlines all matters that are relevant to the Revenue Adjustment Amounts and is structured as follows:

Section 2	Provides an overview of the Regulatory Process relevant to the Revenue Adjustment Amounts.
Section 3	Provides a summary of the Revenue Adjustment Amounts calculated for FY2023.
Section 4	Discusses the adjustments that are made to the approved Allowable Revenue as part of the Revenue Adjustment Amounts calculation.
Section 5	Provides a summary of the Total Actual Revenue.
Section 6	Outlines the Electric Revenue Adjustment calculation.

Unless otherwise defined, capitalised terms in this submission have the meaning given in UT5. Aurizon Network has prepared detailed financial models (**Models**) in support of this submission and has provided these to QCA staff in electronic form. The Models include:

- Billing data for each Access Holder;
- Take or Pay calculations;
- Details of contractual transfers of Access Rights;
- Electric Revenue Adjustment calculations; and
- Information and calculations relating to the adjustments to Allowable Revenue in respect of clauses 4.3(c)(i) to (ix) of Schedule F of UT5.

The Models contain Confidential Information and billing data relating to individual Train Services, disclosure of which would result in a breach of Aurizon Network's confidentiality obligations to relevant Access Holders. As a result, Aurizon Network claims confidentiality over each of the Models. Outputs from the Models are summarised in this submission.

Please note that the tables included within this submission may not add due to rounding.

2. Overview of the Regulatory Process

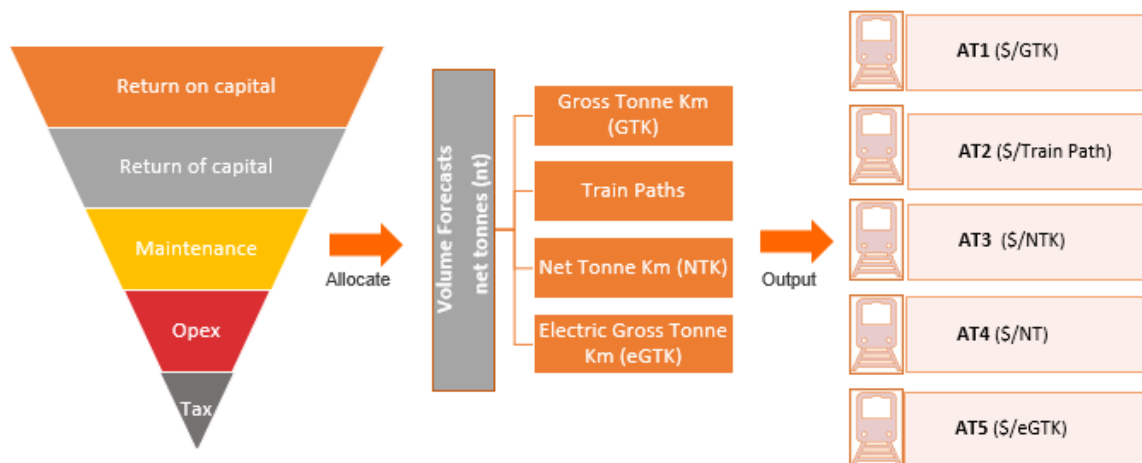
2.1 Regulatory provisions

Aurizon Network's Allowable Revenues are derived using a 'building blocks' approach and "...generate expected revenue for the service that is at least enough to meet the efficient costs of providing access to the service and include a return on investment commensurate with the regulatory and commercial risks involved..."¹

Aurizon Network's capital related charges, efficient operating and maintenance costs and tax expense 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 components of Reference Tariffs, which form the basis of Aurizon Network's Revenue Adjustment Amounts. Refer to Figure 1 for a visual representation of this process.

Figure 1. Maximum Allowable Revenue to Reference Tariffs



Schedule F of UT5 provides:

- i. the basis on which Aurizon Network recovers revenue from Access Holders, primarily from Reference Tariffs charged for train services operated; and
- ii. 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.

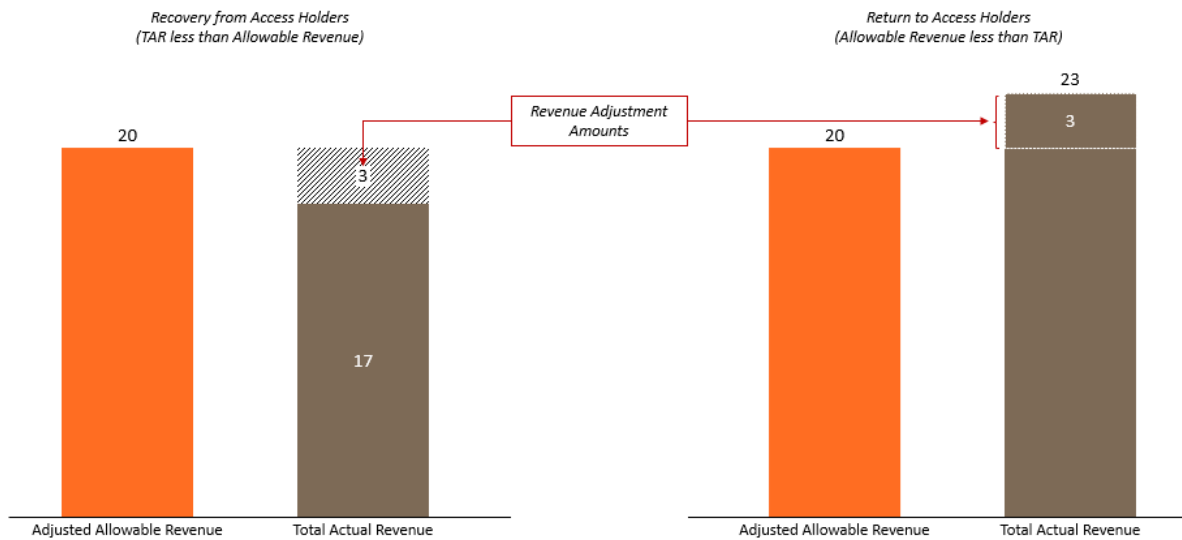
2.2 Revenue Adjustment Amounts

Aurizon Network is required to recover from (or return to) Access Holders the Revenue Adjustment Amounts, being the difference between revenue earned (Total Actual Revenue or 'TAR') and

¹ Queensland Competition Authority Act, 1997 (Qld), Section 168A(a)

revenue allowed (Adjusted Allowable Revenue or 'AR') for the relevant Reference Tariff components. Figure 2 shows a visual representation of this concept.

Figure 2. Revenue Adjustment Amounts



There are seven Revenue Adjustment Amounts detailed within clause 4.3 of Schedule F of UT5:

- 'non-electric' Revenue Adjustment Amounts (**AT₂₋₄**) for each of the five Coal Systems; and
- 'electric' Revenue Adjustment Amounts (**AT₅**), for the Goonyella and Blackwater Coal Systems.

A Revenue Adjustment Amounts submission must be submitted to the QCA by the later of 31 October after the end of each Year of the Term or 30 days after an Adjustment Charge submission is approved relating to the relevant Year.

Within the **AT₂₋₄** and **AT₅** Revenue Adjustment Amounts, the following adjustments to Allowable Revenue are provided for under clause 4.3(c) of Schedule F of UT5:

- Approved Weighted Average Cost of Capital (**WACC**);
- Maintenance costs;
- Non-Electric Operating Expenditure Allowance (**NOEA**);
- Electricity connection costs;
- Audit costs;
- Condition Based Assessment costs;
- Ground penetrating radar costs;
- Rebate adjustments; and
- Costs relating to compliance with the Access Undertaking.

These adjustments are individually detailed in section 4 of this submission.

3. Revenue Adjustment Amounts for FY2023

3.1 Revenue Adjustment Amounts

Revenue Adjustment Amounts are primarily caused where actual coal volume throughput (and the associated operational parameters) varies from the regulatory coal volume forecasts (**System Forecast**), which form a key input in the determination of Reference Tariffs for each Coal System.

The FY2023 System Forecast for the CQCN was 226.6 million net tonnes (**NT**) and the actual throughput was 207.6 million NT.

Summaries of the System Forecast NT and Gross Tonne Kilometres (**GTK**) by Coal System compared with actual NT and GTK are provided in Table 2 and Table 3.

Table 2. FY2023 System Forecast NT compared to Actual NT

Coal System	Forecast NT million	Actual NT million	Variance %
Blackwater	63.0	52.4	-17%
Goonyella	114.6	107.0	-7%
Moura	12.8	12.9	1%
Newlands	17.1	20.7	21%
GAPE	19.1	14.6	-24%
Total	226.6	207.6	-8%

Table 3. FY2023 System Forecast GTK compared to Actual GTK

Coal System	Forecast GTK billion	Actual GTK billion	Variance %
Blackwater	36.0	30.5	-15%
Goonyella	37.2	34.6	-7%
Moura	3.3	3.3	0%
Newlands	3.9	4.9	24%
GAPE	9.7	7.7	-21%
Total	90.1	81.0	-10%

Blackwater, Goonyella, and GAPE Coal Systems recorded GTK which were lower than the System Forecast and Take or Pay triggered in these Coal Systems. Take or Pay recovered the full amount of the AT₂₋₄ shortfall between Total Actual Revenue and Allowable Revenue.

The Newlands System railed above forecast, resulting in an over-recovery of AT₂₋₄ Allowable Revenue. Moura System volumes were materially in line with the forecast and actual revenue was closely aligned to the Allowable Revenue.

The Blackwater System recorded Total Actual Revenue in respect of AT₅ below Allowable Revenue due to the lower GTK, partially offset by a higher Electric / Diesel % than was assumed when setting the System Forecast.

The Goonyella System recorded Total Actual AT₅ revenue below Allowable Revenue due to the lower GTK and a lower Electric / Diesel % than the System Forecast.

The Revenue Adjustment Amounts for 'non-electric' and 'electric' are reconciled to the Allowable Revenue and Total Actual Revenue in Table 4 and Table 5. These amounts include the adjustments to Allowable Revenue that are detailed in section 4 of this submission.

Table 4. Revenue Adjustment Amounts AT₂₋₄

Coal System	Total Actual Revenue	Allowable Revenue	Adjustments to Allowable Revenue	Adjusted Allowable Revenue	Revenue Adjustment Amounts
Blackwater	348.9	348.9	7.8	356.7	7.8
Goonyella	279.2	279.2	2.5	281.7	2.5
Moura	53.5	53.5	3.1	56.7	3.2
Newlands	36.1	29.6	2.4	31.9	(4.1)
GAPE	107.8	107.8	0.6	108.4	0.6
Total	825.4	819.0	16.4	835.4	9.9

Table 5. Revenue Adjustment Amounts AT₅

Coal System	Total Actual Revenue	Allowable Revenue	Adjustments to Allowable Revenue	Adjusted Allowable Revenue	Revenue Adjustment Amounts
Blackwater	83.7	92.8	(0.0)	92.8	9.1
Goonyella	69.6	82.9	0.7	83.7	14.1
Total	153.3	175.7	0.7	176.4	23.1

Appendix B of this submission shows a comparison of historical Revenue Adjustment Amounts from FY2007 to FY2023.

4. Adjustments to Allowable Revenue

Clause 4.3(c) of Schedule F of UT5 details adjustments that are made to the approved Allowable Revenue as part of the Revenue Adjustment Amounts calculation. The adjustments are summarised in Figure 3.

Figure 3. Revenue Adjustments

Approved WACC	<p>Clause 4.3(c)(i) Weighted Average Cost of Capital. Adjustment to reflect the difference between the actual Approved WACC and the Approved WACC that was used in determining the Reference Tariffs.</p>
Maintenance Costs	<p>Clause 4.3(c)(ii) Adjustment to reflect the difference between the actual maintenance costs approved by the QCA and the sum of the Maintenance Indicator and the variable maintenance cost adjustment.</p>
NOEA	<p>Clause 4.3(c)(iii) NOEA is the Non-Electric Operating Expenditure Allowance used for the purpose of determining the applicable Allowable Revenue for the Year. Commenced in FY2022. Is a component relating to the recovery of Aurizon Network's Non-Electric Operating Expenditure Allowance, excluding those costs referred to in clause 4.3(c)(ii).</p>
Electricity Connection Costs	<p>Clause 4.3(c)(iv) Adjustment to reflect the difference between actual and forecast electricity connection costs, used in determining the Reference Tariffs.</p>
Audit Costs	<p>Clause 4.3(c)(v) Adjustment to reflect required audit costs required under the Undertaking that are not already recoverable elsewhere within the Undertaking.</p>
Condition Based Assessment Costs	<p>Clause 4.3(c)(vi) Adjustment to reflect Condition Based Assessment costs required under Undertaking that are not already recoverable elsewhere within the Undertaking.</p>
Ground Penetrating Radar Costs	<p>Clause 4.3(c)(vii) Adjustment to reflect ground penetrating radar costs not already recoverable elsewhere within the Undertaking.</p>
Rebates	<p>Clause 4.3(c)(viii) Adjustment to reflect the difference between actual and forecast payments of rebates, used in determining the Reference Tariffs. .</p>
Compliance with Undertaking Costs	<p>Clause 4.3(c)(ix) Adjustment to reflect Undertaking compliance costs not already recoverable elsewhere within the Undertaking.</p>

4.1 Maintenance Costs Adjustment

With respect to the Maintenance Costs Adjustment (clause 4.3(c)(ii)(B) of Schedule F to UT5), Aurizon Network has calculated a net recovery from Access Holders of \$16.3m. The adjustment reconciles the difference between:

- the actual maintenance costs approved by the QCA for FY2023;
- the Maintenance Indicator for FY2023; and
- the variable maintenance cost adjustment.

The variable maintenance cost adjustment is calculated by multiplying the relevant AT₁ Reference Tariff by the difference between the actual GTK for FY2023 and the GTK Forecast for FY2023.

Actual maintenance costs are those included within the annual Maintenance Costs Claim that was approved by the QCA on 19 October 2023.

The Maintenance Costs Adjustments are summarised in Table 6 and Table 7.

Table 6. Maintenance Costs Adjustment AT₂₋₄

Coal System	Maintenance Costs Claim	Maintenance Indicator	Sub-Total	Variable Maintenance Costs Adjustment	Total Adjustment
Blackwater	65.3	62.0	3.3	5.5	8.9
Goonyella	58.6	56.6	2.0	1.8	3.8
Moura	13.6	12.8	0.8	(0.0)	0.8
Newlands	6.8	2.9	4.0	(1.8)	2.1
GAPE	7.6	10.3	(2.7)	3.1	0.4
Total	151.8	144.5	7.4	8.7	16.0

Table 7. Maintenance Costs Adjustment AT₅

Coal System	Maintenance Costs Claim	Maintenance Indicator	Total Adjustment
Blackwater	5.8	6.1	(0.3)
Goonyella	6.7	6.2	0.6
Total	12.5	12.3	0.3

4.2 NOEA Adjustment

With respect to the Non-Electric Operating Expenditure Allowance Adjustment (clause 4.3(c)(iii) of Schedule F to UT5), Aurizon Network has calculated a net recovery from Access Holders of \$5.4m. The adjustment is to reflect the difference between forecast CPI of 2.37% and the actual CPI for FY2023, being 6.33%, multiplied by the NOEA.

The NOEA Adjustment is summarised in Table 8.

Table 8. NOEA Adjustment AT₂₋₄

Coal System	Non-Electric Operating Expenditure Allowance	NOEA Adjustment
Blackwater	53.9	2.1
Goonyella	12.9	0.5
Moura	58.8	2.3
Newlands	5.8	0.2
GAPE	3.6	0.1
Total	135.1	5.4

4.3 Electricity Connection Costs Adjustment

With respect to clause 4.3(c)(iv) of Schedule F of UT5, Aurizon Network has calculated a net recovery from Access Holders of \$0.5m for AT₅ 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 AT₅ Reference Tariff components for FY2023.

4.4 Rebates Adjustment

With respect to clause 4.3(c)(viii) of Schedule F of UT5, Aurizon Network has calculated a net return to Access Holders of \$5.0m:

- the amounts paid in respect of rebates for FY2023; and
- the forecast payments of those rebates used for the purpose of determining the relevant Reference Tariffs for FY2023.

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

4.5 Other Adjustments

With respect to clauses 4.3(c)(i), 4.3(c)(v), 4.3(c)(vi), 4.3(c)(vii) and 4.3(c)(ix) of Schedule F of UT5, Aurizon Network has calculated that there is no Revenue Adjustment Amount in respect of Approved WACC, the cost of audits, condition-based assessment costs, ground penetrating radar costs and other compliance costs, that are not recovered elsewhere within the Undertaking.

4.6 Adjusted Allowable Revenues Summary

The Adjusted Allowable Revenues are reconciled to the Allowable Revenue as summarised in Table 9 and Table 10:

Table 9. Adjusted Allowable Revenues AT₂₋₄

Coal System	Allowable Revenue	Maintenance Costs Adjustment	NOEA Adjustment	Rebates Adjustment	Adjusted Allowable Revenue
Blackwater	348.9	8.9	2.1	(3.2)	356.7
Goonyella	279.2	3.8	0.5	(1.8)	281.7
Moura	53.5	0.8	2.3	-	56.7
Newlands	29.6	2.1	0.2	0.0	31.9
GAPE	107.8	0.4	0.1	-	108.4
Total	819.0	16.0	5.4	(5.0)	835.4

Table 10. Adjusted Allowable Revenues AT₅

Coal System	Allowable Revenue	Maintenance Costs Adjustment	Rebates Adjustment	Electricity Connection Costs Adjustment	Adjusted Allowable Revenue
Blackwater	92.8	(0.3)	-	0.3	92.8
Goonyella	82.9	0.6	(0.0)	0.2	83.7
Total	175.7	0.3	(0.0)	0.5	176.4

5. Total Actual Revenue

5.1 Adjustments to Access Charges

The Access Charges payable by Access Holders for the operation of 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:

- Total Actual Revenue includes the Access Charges billed by Aurizon Network to Access Holders.
- Allocations for Cross System Train Services between the Blackwater and Goonyella Systems are determined in accordance with clause 4.2(b) of Schedule F of UT5.
- Total Actual Revenue in the Blackwater, Goonyella and GAPE Systems include Take or Pay. Take or Pay has been determined in accordance with the relevant 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 has been provided to the QCA with this submission.
- No Relinquishment Fees or Transfer Fees were collected, or were entitled to be collected, during FY2023.

Total Actual Revenue for AT₂₋₄ and AT₅ by Coal System is summarised in Table 11:

Table 11. Total Actual Revenue

Coal System	Total Actual Revenue	
	AT ₂₋₄	AT ₅
Blackwater	348.9	83.7
Goonyella	279.2	69.6
Moura	53.5	-
Newlands	36.1	-
GAPE	107.8	-
Total	825.4	153.3

6. Electric Revenue Adjustment

6.1 Calculation of the Electric Revenue Adjustment

Aurizon Network is required under clause 4.3(l) of Schedule F of UT5 to determine if there is an Electric Revenue Adjustment. An Electric Revenue Adjustment is required if:

- (i) the relevant Reference Tariff is a System Reference Tariff;
- (ii) there is a Decline in Electric Utilisation for the relevant Year; and
- (iii) there is an AT₅ Revenue Shortfall for the relevant Year.

Aurizon Network has calculated that no Electric Revenue Adjustment is required for FY2023. Table 12 details the steps within the calculation:

Table 12. Electric Revenue Adjustment

Description	Goonyella System	Blackwater System
Electric Utilisation Floor (EUF) %	71%	65%
Electric Capacity Factor (ECF) %	98%	94%
System Forecast GTK (bn) (SFGTK)	37.2	36.0
System Forecast eGTK(bn)	36.3	26.1
System Forecast Electric Utilisation (SFEU) %	98%	73%
Actual GTK (bn)	34.6	30.5
Actual eGTK(bn)	30.5	23.5
Electric Utilisation Level (EUL) %	88%	77%
Decline in Utilisation calculation		
EUL less EUF %	17%	12%
Actual eGTK(bn) less (SFGTK x ECF x EUF)	4.6	1.5
Is there a Decline in Electric Utilisation? (both calculations negative)	No	No
AT ₅ revenue shortfall / (surplus) \$m	14.1	9.1
Is there an AT ₅ shortfall?	Yes	Yes
Is there an Electric Revenue Adjustment Amount? (requires two "Yes" answers above)	No	No
Electric Revenue Adjustment Amount	-	-

Appendix A – Schedule for Publication

Total Actual Revenue		Adjusted Allowable Revenue								Revenue Adjustment Amounts
		AR Adjustments								
AT ₂₋₄	Total Actual Revenue	AT ₂₋₄	Allowable Revenue	Approved WACC Adjustment	Maintenance Costs Adjustment	NOEA Adjustment	Other Adjustments	Rebates Adjustment	Adjusted Allowable Revenue	Total Recovery / (Return)
Blackwater	348,869,623	Blackwater	348,869,623	-	8,865,474	2,137,607	-	(3,214,326)	356,658,377	7,788,755
Goonyella	279,184,723	Goonyella	279,184,723	-	3,777,419	512,472	-	(1,756,844)	281,717,770	2,533,046
Moura	53,494,675	Moura	53,535,902	-	784,081	2,331,363	-	-	56,651,346	3,156,671
Newlands	36,064,690	Newlands	29,566,628	-	2,132,601	229,707	-	5,550	31,934,486	(4,130,203)
GAPE	107,815,195	GAPE	107,815,195	-	445,483	143,578	-	-	108,404,256	589,062
	825,428,905		818,972,072	-	16,005,058	5,354,726	-	(4,965,619)	835,366,236	9,937,331
AT ₅	Total Actual Revenue	AT ₅	Allowable Revenue	Approved WACC Adjustment	Maintenance Costs Adjustment	Electricity Connection Costs Adjustment	Other Adjustments	Rebates Adjustment	Adjusted Allowable Revenue	Total Recovery / (Return)
Blackwater	83,679,316	Blackwater	92,800,626	-	(325,661)	285,860	-	-	92,760,824	9,081,508
Goonyella	69,591,064	Goonyella	82,921,352	-	581,766	199,649	-	(45,833)	83,656,934	14,065,870
	153,270,380		175,721,978	-	256,104	485,509	-	(45,833)	176,417,758	23,147,378
Total Revenue Adjustment Amount										33,084,708

Appendix B – Historical Revenue Adjustment Amounts

A comparison of the FY2023 Revenue Adjustment Amounts (excluding cost of capital adjustments) with previous submissions made by Aurizon Network in the period FY2007 to FY2023 is set out in Table 13.

Table 13. Revenue Adjustment Amounts FY2007 to FY2023

Financial Year	AT ₂₋₄ Adjustment	AT ₅ Adjustment	Total Adjustment
2007	15.7	10.1	25.8
2008	27.8	15.8	43.6
2009	4.6	28.3	32.9
2010	(6.1)	6.0	(0.1)
2011	19.2	30.0	49.2
2012	2.7	11.2	13.9
2013	28.2	10.9	39.1
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
2018	(5.6)	4.9	(0.7)
2019	(9.4)	(2.5)	(11.9)
2020	(0.5)	3.4	3.0
2021	(35.4)	17.7	(17.7)
2022	34.4	10.5	44.9
2023	9.9	23.1	33.1