



Aurizon Network
2017 Access Undertaking
Review of Reference Tariffs - FY2023

February 2022



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1. Executive Summary

1.1 Overview

This submission is provided to the Queensland Competition Authority (QCA) in accordance with Schedule F, clause 4 of the 2017 Access Undertaking (UT5). It sets out the methodology, data and assumptions that have been used to review FY2023 Allowable Revenues and Reference Tariffs for each Coal System.

The proposed System Forecasts, Allowable Revenues and Reference Tariffs for FY2023 are summarised below. Please note that minor variances may exist due to rounding.

1.2 System Forecasts

In establishing the proposed System Forecasts for each Coal System in the Central Queensland Coal Network (CQCN), Aurizon Network consulted directly with Customers. Where Customers provided a volume forecast for their individual Origin / Destination pairings, Aurizon Network assessed those forecasts against both the relevant contract volume and an annualised volume forecast based on actual railings for the FY2022 year to date (YTD) (i.e. between July to January 2022).

For each Origin / Destination pair, if the volume forecast provided by the Customer:

- exceeded either the contract volume or the annualised forecast, Aurizon Network applied the higher of contract or the annualised forecast.
- was below the contract volume, Aurizon Network applied the volume forecast provided by the Customer.

Where Customers did not provide a volume forecast for their individual Origin / Destination pairings, Aurizon Network has generally applied the FY22YTD annualised forecast, however if required, these have been capped at contract volume and adjusted for known events (e.g. mine closure or ad hoc Train Services).

The proposed System Forecasts for FY2023 reflect the aggregate of all Origin / Destination pairings in each Coal System. These are summarised in Table 1 below as both million Net Tonnes (mnt) and Gross Tonne Kilometres (GTK).

Table 1 Proposed System Forecasts – FY2023

System	Net Tonnes	GTK'000
Blackwater	63.0	35,990,446
Goonyella	114.6	37,173,257
Moura	12.8	3,335,777
Newlands	17.1	3,914,712
GAPE	19.1	9,682,695
Total	226.6	90,096,887

The methodology used to arrive at the proposed System Forecasts is outlined in Section 3 of this submission.

1.3 Allowable Revenue

Aurizon Network has proposed adjustments to FY2023 Allowable Revenue inputs to reflect a range of matters, including:

- recent regulatory determinations;
- outcomes of the Maintenance and Renewal Strategy and Budget engagement with the Rail Industry Group (RIG); and
- latest pricing advice from third parties, including the QCA, electricity retailers, electrical transmission and distribution entities and the Independent Expert (IE).

The proposed AT2-4 and AT5 Allowable Revenue for the CQCN are summarised in Table 2 below.

Table 2 Proposed Allowable Revenues – FY2023 (\$m)

System	AT2-4 (\$m)	AT5* (\$m)
Blackwater	378.7	93.7
Goonyella	307.0	84.8
Moura	56.4	--
Newlands	35.2	--
GAPE	104.3	--
Total	881.6	178.5

* At the time of submission, Aurizon Network had not received written notification of pricing for FY2023 transmission and connection charges from the relevant Distribution Entities and/or Transmission Entities. Aurizon Network has updated its forecast of FY2023 transmission and connection charges and electrical energy charges to reflect expected increases in these amounts compared to FY2022. Aurizon Network may seek a further variation to these charges where such a notification is received following this submission and constitutes an Endorsed Variation Event.

A discussion of the respective Allowable Revenue adjustments applicable to each system is provided in Sections 4 and 5 of this submission.

1.4 Reference Tariffs

The combination of the proposed System Forecasts and proposed Allowable Revenues results in the following updated Reference Tariffs for the CQCN.

Table 3 Proposed Reference Tariffs – FY2023

System	AT1	AT2	AT3	AT4	AT5	EC	QCA Levy	IE Pass Through Cost
Blackwater	1.01	2,487.34	7.72	2.77	3.59	1.11	0.0027	0.01868
Goonyella	0.70	1,575.88	5.81	1.19	2.38	1.11	0.0027	0.01868
Moura	1.87	736.68	12.92	2.10	--	--	0.0027	0.01868

System	AT1	AT2	AT3	AT4	AT5	EC	QCA Levy	IE Pass Through Cost
Newlands	1.95	333.12	7.09	0.95	--	--	0.0027	0.01868
GAPE	1.57	15,464.32	0.19	0.87	--	--	0.0027	0.01868

Subject to QCA approval, Aurizon Network proposes that the Reference Tariffs outlined in Table 3 above be applicable from 1 July 2022.

It should be noted that:

- the proposed QCA Levy has been updated to reflect the QCA's estimate of regulatory fees for FY2022;
- the proposed IE Pass Through Cost has been updated to reflect the IE's estimate of its FY2023 charges (as notified to Aurizon Network on 10 February 2022); and that
- both Reference Tariffs have been calculated having regard to the revised FY2023 volume forecasts outlined in this submission.

Aurizon Network may seek a further variation to the QCA Levy for FY2023 following receipt of the relevant pricing notification from the QCA.

2. Introduction

2.1 Overview of the Regulatory Process

Schedule F to UT5 provides:

- Allowable Revenues;
- System Forecasts; and
- Reference Tariffs,

for each Coal System and for each year until financial year (FY) 2023.

Reference Tariffs are an essential element of UT5 as they are used to determine the Access Charges payable to Aurizon Network for the provision of the declared service. They are derived directly from the Allowable Revenues and volume forecasts that are applicable to each Coal System.

Both the Allowable Revenues and volume forecasts are based on a number of assumptions made at a point in time. To ensure that the Reference Tariffs applicable to each Coal System for each year remain efficient and cost reflective, UT5 provides a process through which Aurizon Network can seek QCA approval to update a defined number of assumptions to reflect the latest available information. This process is the annual review of Reference Tariffs.

Schedule F, Clause 4 outlines all matters relevant to the Annual review of Review Tariffs, including the variations to Allowable Revenue that Aurizon Network may submit to the QCA. Aurizon Network must submit these variations to the QCA by 28 February of each Year during the Term.

A summary of each of the adjustments proposed by Aurizon Network in this submission is outlined in Table 4 below.

Table 4 Proposed adjustments impacting FY2023 Allowable Revenues and Reference Tariffs

Adjustment	Clause Reference ¹	Description
Revenue Adjustment Amount (Revenue Cap) for FY2021	4.1(a)(i)	The inclusion of this variation is provided for under Schedule F.4.1(a)(i). Aurizon Network's FY2021 Revenue Adjustment Amounts were approved by the QCA on 16 December 2021.
Capital Expenditure Allowable Revenue Adjustment	4.1(a)(ii)	The value of this adjustment is determined in accordance with Schedule E, clause 5(b). It reconciles the difference in Allowable Revenues between the Capital Indicator for each Coal System (i.e. the forecast value used to set Allowable Revenues and Reference Tariffs) and the actual value of capital expenditure approved by the QCA for each year. Aurizon Network has included an indicative value of the FY2021 Capital Expenditure Allowable Revenue Adjustment within this submission, which reflects the values outlined within the FY2021 Capital Expenditure Claim, submitted to the QCA on 17

¹ All clause references are contained within Schedule F to UT5.

Adjustment	Clause Reference ¹	Description
		September 2021. This amount may be subject to change pending the outcome of QCA final decision on the FY2021 capital expenditure claim and the associated FY2021 RAB Roll-forward.
Revised volume forecasts for FY2023	4.1(b)(i)	Aurizon Network proposes a revised volume forecast for the CQCN of 226.6 mnt. Details of the methodology used to estimate the revised volume forecasts for each Coal System are outlined in Section 3 of this submission.
Proposed Maintenance Indicator	4.1(b)(v)	On 14 February 2022, the Chair of the RIG notified Aurizon Network and the QCA that the FY2023 Maintenance Strategy and Budget proposed for all Coal Systems had been approved. Aurizon Network has updated the FY2023 Maintenance Indicator for each Coal System accordingly. Further detail is contained within Section 4.3.
Proposed Capital Indicator	4.1(b)(vi)	On 14 February 2022, the Chair of the RIG notified Aurizon Network and the QCA that the FY2023 Renewal Strategy and Budget proposed for all Coal Systems had been approved. Aurizon Network has updated the FY2023 Capital Indicator for each Coal System accordingly. Further detail is contained within Section 4.4.
Tax Allowance	4.1(b)(vii)(F)	The tax allowance is a computation of the post-tax revenue model and is updated to reflect the changes proposed within this submission.
Forecast IE Pass Through Cost	4.1(b)(viii)	The IE advised Aurizon Network of the forecast IE Pass Through Cost for FY2023 on 10 February 2022. Further detail is provided within Section 4.6.
Electric Transmission and Connection Charges	4.1(c)(ii)	Change in electric infrastructure charges to reflect the latest forecast of transmission and connection charges and the revised volume forecast for FY2023. Further information is outlined in Section 5.
Electric Energy (EC) Charge	2.2(a)	Change in Electric Energy Charges (EC) to reflect the latest cost forecasts and the revised volume forecast for FY2023. Further information is outlined in Section 5.
QCA Levy		At the time of submission, the QCA had not yet notified Aurizon Network of its forecast regulatory fees for FY2023. Aurizon Network has updated the FY2023 QCA Levy to reflect the most recent cost forecasts, which are based the QCA's forecast regulatory fees for FY2022 and revised volume forecasts for FY2023. Further information is outlined in Section 5.

Aurizon Network has applied the adjustments outlined in Table 4 to adjust Reference Tariffs and Allowable Revenues for each Coal System.

In addition to the aforementioned adjustments, this submission also takes into consideration the following matters, which are relevant to the determination of FY2023 Reference Tariffs:

- Reconciliation of Private Incremental Costs and the expiration of expansion pricing arrangements for Meteor Downs South Train Services; and
- Proposed regulatory asset life for ballast.

Please refer to Section 5 of this submission for more information in relation to these matters.

Unless otherwise defined, capitalised terms in this submission have the meaning given to those terms in UT5.

2.2 Form of Submission

This submission outlines all matters that are relevant to the Annual review of Reference Tariffs for FY2023:

Section 3	Sets out the revised System Forecasts for each Coal System and contains the methodology and assumptions used to determine them.
Section 4	<p>Outlines the proposed adjustments to FY2023 Allowable Revenues, including:</p> <ul style="list-style-type: none"> • Second Year Allowable Revenue Adjustment; • Capital Expenditure Allowable Revenue Adjustment; • Revised Direct Maintenance Indicator; and • Revised Capital Indicator;
Section 5	<p>Discusses other relevant matters for consideration, including:</p> <ul style="list-style-type: none"> • Adjustment to forecast electric infrastructure and electric energy charges; • Adjustment to the forecast QCA Levy; • Pricing arrangements for Meteor Downs South Train Services; and • Proposed regulatory asset life for ballast.
Section 6	Outlines the combined impact of the proposed adjustments on FY2023 Allowable Revenues and Reference Tariffs.
Appendices	<p>Appendices to this submission include:</p> <ul style="list-style-type: none"> • Clean and marked-up versions of UT5; and • Aurizon Network's FY23 Maintenance and Renewal Strategy and Budget.

Aurizon Network notes that this submission contains Confidential Information specific to one End User. A separate redacted version will be provided to the QCA in a form that is suitable for publication.

In addition, Aurizon Network has prepared detailed financial models (**the Models**) in support of this submission and has provided the Models to QCA staff in electronic form. The Models contain Confidential Information relating to individual Train Services and accordingly Aurizon Network requests that the Models are not published.

3. System Forecasts

3.1 Proposed variation to System Forecasts

UT5, Schedule F, Clause 4.1(b) provides a process through which Aurizon Network can submit revised System Forecasts to the QCA for approval prior to the beginning of each financial year.

For FY2023, Aurizon Network proposes to reduce CQCN volume forecasts from 253.4 mnt to 226.6 mnt. The proposed volume forecast varies slightly from the volume forecast of 226.8 mnt that was assumed during the development of the FY2023 Final Draft Maintenance and Renewals Strategy and Budget.

The proposed changes to the System Forecasts for each Coal System are outlined in Table 5 and Table 6 below.

Table 5 Proposed Regulatory Volume Forecasts (Net Tonnes) – FY2023

Net Tonnes (million)	Current Approved FY2023 Forecast	Proposed FY2023 Forecast	Variance
Blackwater	71.2	63.0	(8.2)
Goonyella	132.0	114.6	(17.3)
Moura	18.2	12.8	(5.4)
Newlands	13.2	17.1	3.9
GAPE	18.9	19.1	0.2
Total	253.4	226.6	(26.8)

Table 6 Proposed Regulatory Volume Forecasts (Gross Tonne Kilometres) – FY2023

GTK'000	Current Approved FY2023 Forecast	Proposed FY2023 Forecast	Variance
Blackwater	40,440,684	35,990,446	(4,450,238)
Goonyella	42,978,021	37,173,257	(5,804,764)
Moura	4,721,773	3,335,777	(1,385,996)
Newlands	2,691,284	3,914,712	1,223,428
GAPE	9,579,993	9,682,695	102,702
Total	100,411,755	90,096,887	(10,314,868)

3.2 Regulatory System Forecasts – Approved vs Actual

The current approved system volume forecast for FY2023 of 253.4 mnt was based on the UT5 Final Decision in December 2019. It was set by extrapolating the QCA approved volume forecast for FY2021 (which at the time was 249.2 mt) by the compounding annual growth rate (CAGR) for each Coal System; calculated between FY2019 - FY2021. This indicative approach was adopted at that point in time for the purpose of estimating Reference Tariffs up until the Reset Date, i.e. for FY2022 and

FY2023. No other forecast was available that could be relied upon, and it was generally understood that these forecasts would be updated as part of this annual review of Reference Tariffs process.

Table 7 below compares the QCA approved regulatory forecast for the CQCN to actual billed tonnes for FY2018 to FY2021.

Table 7 CQCN Regulatory Volume Forecasts – UT5 Final Decision (million tonnes)

System	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023
Blackwater	64.6	67.2	68.2	69.2	70.2	71.2
Goonyella	127.6	131.0	131.5	131.5	131.7	132.0
Moura	11.5	15.0	16.5	16.5	17.3	18.2
Newlands	11.7	13.2	13.2	13.2	13.2	13.2
GAPE	15.9	18.9	18.9	18.9	18.9	18.9
UT5 Final Decision	231.2	245.2	248.2	249.2	251.3	253.4
Revised forecast	231.2	233.8~	240.0*	239.7**	226.9***	226.6^
Actual Tonnes	229.6	232.7	226.9	208.3		
- Variance to UT5 Final Decision	(1.6)	(12.5)	(21.3)	(40.9)		
- Variance to Revised Forecast	(1.6)	(1.1)	(13.1)	(31.4)		

~ As per Aurizon Network's Reference Tariff Variation DAAU, approved by the QCA on 24 June 2019.

* As per Aurizon Network's Consolidation DAAU, approved by the QCA on 21 February 2020.

** As per Meteor Downs South Pricing DAAU, approved by the QCA on 17 December 2020.

*** As per FY2022 Annual Review of Reference Tariffs, approved by the QCA on 22 June 2021.

^ Revised forecast proposed in this FY2023 Review of Reference Tariffs submission.

Table 7 above illustrates the material (40.9 mnt) shortfall in FY2021 volumes compared to the regulatory forecast. In addition, CQCN railings are approximately 121.4 mnt for FY2022 year to date (YTD) (July 2021 – January 2022). It is likely that actual volumes in FY2022 will again be lower than both the UT5 Final Decision forecast, and the current approved forecast for the year. These outcomes are reflective of the current volatility in demand and support Aurizon Network's proposal to reduce the current regulatory volume forecasts for FY2023.

3.3 Forecasting Methodology

In establishing the proposed FY2023 System Forecasts for each Coal System, Aurizon Network consulted directly with End Users and provided them with information relating to railings and regulatory forecasts for each of their respective Origin / Destination pairings.

End Users were asked to review the information and provide feedback to inform the development of the FY2023 System Forecasts which have subsequently been included within this submission.

Where End Users provided a volume forecast for their individual Origin / Destination pairings, Aurizon Network assessed those forecasts against both the relevant contract volume and an annualised volume forecast based on actual railings for FY2022 YTD (i.e. between July 2021 to January 2022).

If the volume forecast provided by the Customer for each Origin / Destination pair:

- exceeded either the contract volume or the annualised forecast, Aurizon Network applied the higher of contract or the annualised forecast.
- was below the contract volume, Aurizon Network applied the volume forecast provided by the Customer.

Where Customers did not provide a volume forecast for their individual Origin / Destination pairings, Aurizon Network has generally applied the FY22YTD annualised forecast, however if required, these have been capped at contract volume and adjusted for known events (e.g. mine closure or ad hoc Train Services).

Aurizon Network has provided an indicative example of how this methodology is applied in practice in the table below:

Table 8 Example of forecasting methodology in practice

Customer	Did Customer Provide Forecast?	Customer Forecast	Contract	Annualised Forecast	Forecast Applied
Customer A	Yes	1,200	1,000	1,050	1,050
Customer B	Yes	600	1,000	800	600
Customer C	No	N/A	1,000	800	800
Customer D	No	N/A	1,000	1,050	1,000

The proposed volume forecasts for each Coal System are provided in Table 9 below. The forecasts are expressed in terms of both Net Tonnes and Gross Tonne Kilometres (GTK).

Table 9 Proposed Volume Forecasts – FY2023

System	Net Tonnes (million)	GTK'000
Blackwater	63.0	35,990,446
Goonyella	114.6	37,173,257
Moura	12.8	3,335,777
Newlands	17.1	3,914,712
GAPE	19.1	9,682,695
Total	226.6	90,096,887

The revised net tonne forecasts for each Coal System have been converted to GTK and electric GTK based on:

- The assumed Reference Train Payload for each Coal System; and
- For the Blackwater and Goonyella systems, the forecast split between diesel and electric consists, which remains aligned to the values approved by the QCA in their UT5 final decision.

The GTK forecast for the Blackwater System has been profiled to derive the monthly GTK forecasts that are required for Schedule F, clause 12.

4. Proposed Allowable Revenue Adjustments

In addition to the revised System Forecasts outlined in Section 3, Aurizon Network submits the following adjustments to FY2023 Allowable Revenues to the QCA for approval:

- Second Year Allowable Revenue adjustment associated with the FY2021 Revenue Adjustment Amount (Revenue Cap);
- Indicative FY2021 Capital Expenditure Allowable Revenue Adjustments. Aurizon Network has based this indicative adjustment on the values outlined within the FY2021 Capital Expenditure Claim, submitted to the QCA on 17 September 2021. Aurizon Network notes that at the time of drafting, the QCA has not yet published a final decision on the FY2021 Capital Expenditure Claim. The proposed value of this adjustment should therefore be considered indicative, as it may be subject to change pending the outcome of the QCA's assessment;
- Revised Direct Maintenance Indicator; and
- Revised Capital Indicator.

The impact of each of these adjustments will vary between Coal Systems and are outlined below.

At the time of this submission, Transitional Arrangements associated with the Independent Expert's ICAR have not yet been agreed. The consultation between Aurizon Network, End Users, Customers, Access Holders and Train Operators may determine that the most effective and efficient way of addressing the Existing Capacity Deficit is for Aurizon Network to make changes to the Rail Infrastructure or the operation and maintenance practices for the Rail Infrastructure in a relevant Coal System.

Consequently, it should be noted that System Forecasts, maintenance and renewal practices, scope, budgets (including the Maintenance and Capital Indicators for each Coal System) and access requirements may be subject to change as a result of any agreed Transitional Arrangements.

4.1 Second Year Allowable Revenue Adjustment

The inclusion of this variation is permitted under Schedule F, 4.1(a)(i). The QCA approved the FY2021 Revenue Adjustment Amount on 16 December 2021. The details of the approved adjustments are outlined in Table 10 below:

Table 10 Approved FY2021 Revenue Adjustment Amounts (\$m)

System	AT2-4 (\$m)	AT5 (\$m)	Total (\$m)
Blackwater	(15.2)	3.1	(12.1)
Goonyella	(7.9)	14.6	6.7
Moura	3.5	--	3.5
Newlands	1.0	--	1.0
GAPE	(16.7)	--	(16.7)
Total Adjustments	(35.4)	17.7	(17.7)

In accordance with Schedule F, Clause 4.4(b), the FY2021 Revenue Cap adjustments are applied to FY2023 Allowable Revenues (**Second Year Allowable Revenue**) including a return on capital amount calculated with reference to the applicable Discount Rate.

The associated adjustments to FY2023 Allowable Revenues are outlined in Table 11 below.

Table 11 FY2021 Revenue Cap - Adjustment to FY2023 Allowable Revenues (\$m)

System	AT2-4 (\$m)	AT5 (\$m)	Total (\$m)
Blackwater	(17.2)	3.5	(13.7)
Goonyella	(9.0)	16.5	7.5
Moura	4.0	--	4.0
Newlands	1.1	--	1.1
GAPE	(18.9)	--	(18.9)
Total Adjustments	(40.0)	20.0	(20.0)

4.2 Capital Expenditure Allowable Revenue Adjustment

The inclusion of this adjustment is permitted under Schedule F, 4.1(a)(ii) and calculated in accordance with Schedule E, clause 5(b). This adjustment reconciles the difference in Allowable Revenue between:

- Approved Capital Expenditure; and the
- Capital Indicator for the Year in which that relevant capital expenditure was commissioned.

The adjustment to Allowable Revenues is comprised of the following components:

- Return on capital
- Return of capital (depreciation offset by inflation); and
- Tax depreciation.

FY2021 Capital Expenditure Allowable Revenue Adjustment

Aurizon Network's FY2021 capital expenditure claim of \$310.7 million including interest during construction was submitted to the QCA on 17 September 2021. On 17 February 2022, the QCA provided its draft decision to Aurizon Network, noting that it is minded to accept approximately \$304.8 million; a proposed reduction of \$5.9 million which related to the Advanced Planning and Scheduling (APS) project.²

Aurizon Network is currently working through the QCA's draft decision as it pertains to the APS project. Aurizon Network may seek to provide further evidence to the QCA to support the inclusion of the full APS project costs within the regulatory asset base. Aurizon Network expects to provide this information no later than 17 March 2022, in line with the QCA's specified timeframes.

For the purpose of this submission, Aurizon Network has calculated an indicative value of the Capital Expenditure Allowable Revenue Adjustment, that reflects the amounts Aurizon Network submitted to the QCA on 17 September 2021. The difference between the Capital Indicator for FY2021 and the submitted capital expenditure for each Coal System are outlined in Table 12 below.

² QCA (2022), Aurizon Network's 2020-21 capital expenditure claim, File Ref: 1463901

Table 12 Submitted Capital Expenditure vs Capital Indicator – FY2021 (\$m)

System	FY2021 Capital Indicator (\$m)	Submitted Capital Expenditure (\$m)	Variance (\$m)
Blackwater	121.2	140.9	19.8
Goonyella	110.0	129.8	19.7
Moura	15.0	9.8	(5.2)
Newlands / GAPE	20.7	21.5	0.7
Total (\$m)	266.9	301.9	35.0

The resulting indicative Allowable Revenue differences are then accrued at the Discount Rate (i.e. the approved WACC) for inclusion in FY2023 Allowable Revenues.

The indicative FY2021 Capital Expenditure Allowable Revenue Adjustments applicable to FY2023 are outlined below:

Table 13 Indicative FY2021 Capital Expenditure Allowable Revenue Adjustment (\$m)

System	AT2-4 (\$m)	AT5 (\$m)
Blackwater	19.8	(0.0)
Goonyella	23.8	(0.1)
Moura	1.0	--
Newlands / GAPE [^]	2.3	--
Total (\$m)	46.9	(0.1)

[^] Aurizon Network notes that the allocation of this adjustment between the Newlands System and GAPE requires the identification of replacement costs associated with GAPE infrastructure enhancements. These values can be confirmed upon release of the QCA's final decision on the FY2021 Capital Expenditure Claim.

Aurizon Network expects the QCA to provide a final decision on the FY2021 capital expenditure claim prior to 30 June 2022. While Aurizon Network has included an indicative value of this adjustment to provide for a transparent and complete assessment of the FY2023 Reference Tariff impacts, this value may need to be revised following the QCA's decision on both Aurizon Network's FY2021 Capital Expenditure Claim and the associated FY2021 RAB Roll-forward.

Aurizon Network notes that the impact of the indicative Capital Expenditure Allowable Revenue adjustment on AT2-4 Allowable Revenues is, in part, attributable to the fact that the capital expenditure associated with APS was not provided for within the FY2021 Capital Indicator.

4.3 FY2023 Maintenance Indicator

The inclusion of this adjustment is permitted under Schedule F, 4.1(b)(v). On 14 February 2022, the Chair of Rail Industry Group notified Aurizon Network of the following voting outcomes:

Table 14 FY2023 Final draft Maintenance Strategy and Budget - voting outcomes

System	Vote Outcome - Special Majority of End Users for that coal system:
Blackwater	Approved the final draft Maintenance Strategy and Budget

System	Vote Outcome - Special Majority of End Users for that coal system:
Goonyella	Approved the final draft Maintenance Strategy and Budget
Moura	Approved the final draft Maintenance Strategy and Budget
Newlands	Approved the final draft Maintenance Strategy and Budget
GAPE	Approved the final draft Maintenance Strategy and Budget

Aurizon Network submits the proposed Maintenance Indicator to the QCA in accordance with clause 7A.11.4(a) of UT5. Aurizon Network notes that the proposed Maintenance Indicator for all Coal Systems is consistent with the Approved Maintenance Strategy and Budget and as a result, should be approved by the QCA.

A comparison between the QCA-approved Maintenance Indicator and the proposed Maintenance Indicator for FY2023 for each Coal System is as follows:

Table 15 FY2023 Maintenance Indicator – Direct (\$m)

System	Current FY2023 Maintenance Indicator (\$m)	Proposed FY2023 Maintenance Indicator (\$m)	Variance (\$m)
Blackwater	71.4	68.1	(3.3)
Goonyella	69.0	62.8	(6.2)
Moura	12.3	12.8	0.4
Newlands	3.4	2.9	(0.5)
GAPE	12.1	10.3	(1.9)
Total (\$m)	168.2	156.7	(11.5)

Aurizon Network has updated Allowable Revenues and Reference Tariffs to reflect the proposed Maintenance Indicator for FY2023.

4.4 FY2023 Capital Indicator

The inclusion of this adjustment is permitted under Schedule F, 4.1(b)(vi). On 14 February 2022, the Chair of the Rail Industry Group notified Aurizon Network of the following voting outcomes:

Table 16 Final draft Renewals Strategy and Budget - Voting outcomes

System	Vote Outcome - Special Majority of End Users for that coal system:
Blackwater	Approved the final draft Renewals Strategy and Budget
Goonyella	Approved the final draft Renewals Strategy and Budget
Moura	Approved the final draft Renewals Strategy and Budget
Newlands	Approved the final draft Renewals Strategy and Budget
GAPE	Approved the final draft Renewals Strategy and Budget

Aurizon Network submits the proposed Capital Indicator to the QCA in accordance with clause 7A.11.4(c) of the 2017AU. Aurizon Network notes that the proposed Capital Indicator for all Coal Systems is consistent with the Approved Renewals Strategy and Budget and as a result, should be approved by the QCA.

A comparison between the current Capital Indicator and the proposed Capital Indicator for FY2023 by each Coal system is outlined in the following table. Please note that these values are expressed in 'Start of Year' terms.

Table 17 FY2023 Capital Indicator (\$m, start of year)

System	Current FY2023 Capital Indicator (\$m)	Proposed FY2023 Capital Indicator (\$m)	Variance (\$m)
Blackwater	112.8	121.2	8.4
Goonyella	98.9	118.7	19.8
Moura	10.6	15.3	4.7
Newlands	6.7	19.7	13.1
GAPE	1.9	2.1	0.2
Total (\$m)	231.0	277.1	46.1

Aurizon Network has updated Allowable Revenues and Reference Tariffs to reflect the proposed Capital Indicator for FY2023.

Allocation of asset renewal expenditure between Newlands and GAPE Train Services

Aurizon Network acknowledges the ongoing engagement with the Newlands / GAPE Working Group to resolve various matters relating to the allocation of capital renewal expenditure between Newlands and GAPE Train Services. To the extent that Aurizon Network and the Working Group resolve these matters, Aurizon Network will seek to reflect this agreed outcome through the appropriate regulatory process. This may require an amendment to the proposed capital and maintenance indicators outlined in Table 15 and Table 17.

4.5 Tax Allowance

The adjustment to the tax allowance is provided for under Schedule F, 4.1(b)(vii)(F).

The tax allowance is a computation of Aurizon Network's post-tax revenue model, which is used to calculate the proposed Allowable Revenues and Reference Tariffs for FY2023. The tax allowance will be updated to reflect, and ensure consistency with, all proposed changes within this submission that impact Allowable Revenues.

4.6 Forecast IE Pass Through Cost

The inclusion of this variation is permitted under Schedule F, 4.1(b)(viii). On 10 February 2022, the Coal Network Capacity Co (CNCC) notified Aurizon Network of its forecast IE Pass Through Cost for FY2023, including relevant adjustments to account for a forecast under-spend, and invoicing under-recovery during FY2022.

Aurizon Network has provided this information in Table 18 below, including the derivation of the FY2023 IE Pass Through Cost Reference Tariff.

Table 18 IE Pass Through Cost – FY2023

Description	Value (\$m)
Estimate of expenditure to operate CNCC in FY2023	4.7
Less: Expense under-spend for FY2022	(0.4)
Add: Invoicing under-recovery for FY2022	--
Estimated Cost FY2023	4.2
CQCN volume forecast for FY2023 (mnt)	226.6
Estimated FY2023 IE Pass Through Cost (\$/nt)	0.01868

5. Other Relevant Pricing Matters

In addition to the proposed adjustments outlined in Section 4 above, there are several other matters that impact the proposed Allowable Revenues and Reference Tariffs for FY2023. These are discussed below.

Aurizon Network notes that coal carrying train services have ceased operating west of Burngrove due to the cessation of mining activities and the expiration of Access Rights using that Rail Infrastructure. Access Undertaking amendments associated with this do not form part of this submission, but will be dealt with through a separate DAAU.

5.1 Adjustments to electric infrastructure charges

The electric transmission charges paid by Aurizon Network are determined in accordance with an established regulatory framework and oversight by the AER. At the time of this submission, the forecast of FY2023 connection and transmission charges has not been received from Transmission Network Service Providers (TNSP).

Aurizon Network has updated the FY2023 TNSP cost forecast to reflect:

- electricity demand based on the proposed (reduced) FY2023 volume forecasts; and
- the final rates for FY2022, as notified to Aurizon Network by the relevant providers during 2021. Aurizon Networks has escalated the FY2022 rates at the regulatory CPI forecast of 2.37%.

The table shows Aurizon Network's updated cost estimates for FY2023.

Table 19 FY2023 TNSP costs (\$m)

System	Current FY2023 TNSP Cost Forecast (\$m)	Proposed FY2023 TNSP Cost Forecast (\$m)	Variance (\$m)
Blackwater	28.7	36.7	8.1
Goonyella	35.1	32.6	(2.5)
Total (\$m)	63.7	69.3	5.6

The proposed TNSP cost forecasts are a key input in determining AT5 Allowable Revenues. Once Aurizon Network receives notification of the updated FY2023 connection and transmission charges is received from the relevant TNSP, Aurizon Network will assess whether the change constitutes an Endorsed Variation Event in accordance with UT5, Schedule F, clause 5.2(b).

5.2 Electric Energy Charge

The EC tariff is set to recover the forecast costs relating to the consumption of electric energy. Recently, Aurizon Network has engaged with its customers to determine future options relating to electricity, including Green Energy within the Electricity Charge. The inclusion of Green Energy within the electric traction mix, will assist members of the supply chain to meet emission targets in both the short and longer term.

UT5 includes an EC tariff for FY2023, which was based on forecast financial inputs. These inputs have since been updated to reflect more recent information received from electricity retailers. Specifically, the forecast for:

- Peak and Off-Peak electricity charges have been updated to reflect the wholesale rates invoiced to Aurizon Network in early February 2022. Aurizon Network is seeing a significant increase in wholesale electricity rates compared to last year; and
- all other charges (such as market, environmental and administration charges), Aurizon Network has adopted the most recently billed rates, escalated at the regulatory CPI forecast of 2.37%.

The net impact of the estimated electric energy charges is outlined in the table below.

Table 20 FY2023 Electric Energy Charges (\$m)

Electric Energy	Current FY2023 Electric Energy Cost Forecast (\$m)	Updated Forecast	Variance
Total (\$m)	65.2	69.0	3.8

For the purpose of setting a revised EC tariff for FY2023, Aurizon Network has taken into consideration of the proposed FY2023 System Forecasts. The resulting EC tariff is as follows:

Table 21 FY2023 EC Tariff

EC Tariff (\$/000 egtk)	Current FY2023 EC	Proposed FY2023 EC	Variance
FY2023	0.92	1.11	0.19

Schedule F, clause 2.2(e) requires Aurizon Network to separately identify the Environment Compliance Charge and Variable Connection Charge within the EC tariff. The relevant amounts are as follows:

Table 22 Composition of proposed electric energy charge for FY2023

Cost component	\$m	\$/000 egtk
Consumption and Supply	52.4	0.84
Environment Compliance Charge	11.6	0.19
Variable Connection Charge	5.0	0.08
Total	69.0	1.11

5.3 QCA Levy

The QCA Levy for each year is set to recover the fees imposed by the QCA on beneficiaries of its regulatory services.

At the time of drafting, the QCA has not yet provided notification of its forecast regulatory fees for FY2023. For the purpose of this submission, Aurizon Network has updated the forecast QCA Levy for FY2023 to reflect:

- the QCA's estimated regulatory fees for FY2022; and
- the proposed FY2023 volume forecast for the CQCN outlined within this submission.

The application of these inputs result in the following amendments to the FY2023 QCA Levy.

Table 23 FY2023 QCA Levy

QCA Levy (\$ per NT)	Current FY2023 QCA Levy	Proposed FY2023 QCA Levy	Variance
Forecast Regulatory Fees (\$m)	2.52	0.62	(1.9)
QCCN Forecasts (mnt)	253.4	226.6	(26.8)
QCA Levy	0.00993	0.00274	(0.007)

Aurizon Network may seek a further variation to the QCA Levy for FY2023 following the QCA's announcement of its fees for the provision of regulatory services for the rail industry.

5.4 Pricing arrangements for Meteor Downs South Train Services

On the 17 December 2020, the QCA approved Aurizon Network's draft amending access undertaking to implement expansion pricing arrangements for the Meteor Downs South mine (**MDS DAAU**).

The expansion pricing arrangements related to the capital expenditure associated with the Starlee Passing Loop (**Expansion Costs**). The approved MDS DAAU provided for the:

- recovery of Expansion Costs over an economic life of two (2) years, i.e. during FY2021 and FY2022;
- application of a discount to the access charge, reflecting the estimated value of Private Incremental Costs (**PIC**) and Connecting Infrastructure (**CI**); and
- inclusion of a positive contribution to the Blackwater System common costs.

To give effect to the above, the MDS DAAU established an Expansion Tariff for MDS Train Services that commenced on 1 July 2020 and is due to expire on 30 June 2022. On expiry of the Expansion Tariff, MDS would be subject to the socialised System Reference Tariff and the same terms and conditions of access as an Access Seeker which sought new or additional Access Rights that did not require an Expansion.³

Expiration of the MDS Expansion Tariff

The Expansion Costs associated with the Starlee Passing Loop have been recovered via the MDS Expansion Tariff during FY2021 and FY2022.

For FY2023, the MDS Expansion Tariff will no longer apply to MDS Train Services. Volume forecasts for MDS Train Services have been incorporated within the Blackwater System Forecasts, and the Reference Tariff paid by MDS Train Services will be the Blackwater System Reference Tariffs, less the applicable PIC and CI discount.

Reconciliation of MDS PIC and CI discounts

As indicated above, the MDS Expansion Tariff for FY2021 and FY2022 was calculated with reference to an estimated value of both PIC and CI costs. On 17 February 2022, the QCA issued its final decision to approve private incremental costs which differed from those assumed by Aurizon Network when

³ Aurizon Network (2020), Meteor Downs South Pricing Draft Amending Access Undertaking, pg. 19.

establishing the relevant Expansion Pricing arrangements in FY2021 and FY2022. This difference is outlined in Table 24 below.

Table 24 MDS Private Incremental Costs

MDS Private Incremental Cost	Estimated PIC (\$m)	Approved PIC (\$m)	Variance
Total	█	█	█

The proposed FY2023 Reference Tariffs for MDS Train Services include a discount derived from the Approved PIC applicable in the year. Aurizon Network has adjusted the FY2023 Approved PIC discount to reconcile the difference in both FY2021 and FY2022 revenues between the estimated PIC and the Approved PIC amounts. The impacts are summarised in Table 25 below.

Table 25 Adjustment to FY2023 MDS Approved PIC amounts

MDS Private Incremental Cost	Allowable Revenue (\$m)
FY2023 MDS Reference Tariff revenue (excl PIC Discount)	█
FY2023 PIC Discount (using Approved PIC)	█
- Reconciliation of FY2021 PIC discount	█
- Reconciliation of FY2022 PIC discount	█
Adjusted value for FY2023 MDS Reference Tariff	█

5.5 Regulatory asset life for Ballast

As part of the QCA's 2018 Decision⁴ on UT5, the QCA required the capitalisation of ballast undercutting renewal costs from FY2020. The QCA's 2018 Decision applied concessional asset lives of 1 year in FY2020 and 2 years in FY2021 for capitalised ballast undercutting renewal costs.⁵

As noted in the QCA's 2018 Decision, Aurizon Network had previously indicated that the economic life of new ballast was between five and seven years.⁶ In the UT5 DAAU, Aurizon Network applied a life of 6 years to ballast undercutting renewal costs for the purpose of forecasting Allowable Revenues until the Reset Date, i.e. for FY2022 and FY2023.

Aurizon Network has recently completed an engineering analysis which among other matters, considered a weighted average ballast asset life for the CQCN. Aurizon Network assessed the useful life of ballast having regard to:

- fouling intervention thresholds and fouling rates; and
- Residual Percentage Void Contamination (PVC) following ballast cleaning activities.

On the basis of this information, Aurizon Network assessed the ballast asset life to be between 7 and 9 years. Noting that the observed PVC will vary across the CQCN, Aurizon Network considers that a ballast life of 8 years (the mid-point of the modelled range) is a reasonable asset life to apply to ballast undercutting renewal expenditure. An asset life of 8 years is also consistent with Aurizon's accounting

⁴ QCA (2018), Decision Aurizon Network's 2017 draft access undertaking, Decision 8.1, pg. 198.

⁵ QCA (2018), pg. 224

⁶ QCA (2018), pg. 225

life for ballast. Aurizon Network also notes that maintaining consistency with the accounting treatment was a key aspect of the QCA's 2018 Decision to capitalise ballast undercutting renewal expenditure.

Aurizon Network is therefore seeking to increase the life applied to ballast undercutting renewal expenditure from 6 years to 8 years for the purpose of this submission.

Aurizon Network intends to make a more detailed submission to the QCA seeking endorsement of an 8-year asset life for ballast undercutting renewal costs prior to the completion of FY2022.

6. Proposed Allowable Revenues and Reference Tariffs

6.1 Approved Allowable Revenues

Schedule F to UT5, provides the FY2023 Allowable Revenues for each Coal System. The current QCA-approved Allowable Revenues for FY2023 are:

Table 26 FY2023 Allowable Revenues (\$m)

System	AT2-4 (\$m)	AT5 (\$m)
Blackwater	357.9	82.4
Goonyella	281.1	71.1
Moura	47.9	--
Newlands	34.4	--
GAPE	122.8	--
Total (\$m)	844.0	153.5

6.2 Aggregate adjustments to FY2023 Allowable Revenues

The aggregate adjustments (as outlined in Section 4 and Section 5) for each Coal System are:

Table 27 Aggregate adjustments – FY2023

System	AT2-4 (\$m)	AT5 (\$m)
Blackwater	20.8	11.2
Goonyella	25.9	13.7
Moura	8.5	--
Newlands	0.8	--
GAPE	(18.5)	--
Total (\$m)	37.6	24.9

6.3 Proposed FY2023 Allowable Revenues

Aurizon Network submits the following adjusted Allowable Revenues to the QCA for approval:

Table 28 Proposed Allowable Revenues – FY2023

System	AT2-4 (\$m)	AT5 (\$m)
Blackwater	378.7	93.7
Goonyella	307.0	84.8
Moura	56.4	--
Newlands	35.2	--
GAPE	104.3	--

System	AT2-4 (\$m)	AT5 (\$m)
Total (\$m)	881.6	178.5

6.4 Proposed FY2023 Reference Tariffs

Reference Tariffs are set such that Aurizon Network can recover the approved Allowable Revenues from the approved System Forecasts.

Aurizon Network submits the following proposed FY2023 Reference Tariffs to the QCA for approval. The proposed Reference Tariffs are a function of the proposed Allowable Revenues outlined in Table 28 above, and the relevant volume metrics derived from the revised System Forecasts in Table 9.

Table 29 Proposed Reference Tariffs – FY2023

System	AT1	AT2	AT3	AT4	AT5	EC	QCA Levy	IE Pass Through Costs
Blackwater	1.01	2,487.34	7.72	2.77	3.59	1.11	0.00274	0.01868
Goonyella	0.70	1,575.88	5.81	1.19	2.38	1.11	0.00274	0.01868
Moura	1.87	736.68	12.92	2.10	--	--	0.00274	0.01868
Newlands	1.95	333.12	7.09	0.95	--	--	0.00274	0.01868
GAPE	1.57	15,464.32	0.19	0.87	--	--	0.00274	0.01868

For clarity, Aurizon Network does not propose any amendments to either the AT₁ or AT₂ Reference Tariffs.

Appendix 1: Amended 2017 Access Undertaking (clean)

Appendix 2: Amended 2017 Access Undertaking (mark-up)

Appendix 3: Maintenance and Renewal Strategy and Budget
