Queensland Competition Authority

Decision

Aurizon Network's 2017 draft access undertaking

December 2018

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Decision and secondary undertaking notice

On 30 November 2016, the Queensland Competition Authority (QCA) received a draft access undertaking from Aurizon Network Pty Ltd (Aurizon Network's 2017 DAU) pursuant to the initial undertaking notice issued on 11 May 2016 under s. 133 of the *Queensland Competition Authority Act 1997* (QCA Act).

Decision

In accordance with s. 134(1) of the QCA Act, the QCA has considered Aurizon Network's 2017 DAU and has decided to refuse to approve it.

The QCA has assessed the appropriateness of all aspects of Aurizon Network's 2017 DAU in accordance with the relevant statutory requirements. The QCA's assessment has considered the appropriateness of Aurizon Network's 2017 DAU proposal overall, and its individual aspects, having regard to s. 138(2) of the QCA Act.

Secondary undertaking notice

This decision and its appendices constitute a secondary undertaking notice for the purposes of s. 134(2) of the QCA Act. It sets out the reasons for the QCA's decision to refuse to approve Aurizon Network's 2017 DAU and the way in which the QCA considers it appropriate for Aurizon Network's 2017 DAU to be amended.

In accordance with s. 134(2), the QCA asks Aurizon Network to:

- amend its 2017 DAU in the way described in this decision and as outlined in Appendix H, being the way the QCA considers appropriate; and
- give the QCA a copy of the amended draft access undertaking within 60 days of receiving this notice.

Flavio M. Menezes

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Professor Flavio Menezes

Chairperson

Queensland Competition Authority

Next steps

Submissions are **not** invited on this decision.

If Aurizon Network complies with the QCA's secondary undertaking notice, the QCA may approve the amended draft access undertaking pursuant to s. 134(3) of the QCA Act.

In the event Aurizon Network does not comply with the QCA's secondary undertaking notice, in accordance with s. 135 of the QCA Act, the QCA may prepare its own draft access undertaking for the declared service. The QCA will provide advice to stakeholders on the way forward for that process, should it become necessary.

EXECUTIVE SUMMARY

The QCA's decision is to refuse to approve Aurizon Network's 2017 DAU. For ease of reference, this executive summary highlights the key elements of the QCA's decision and the way in which the QCA considers it appropriate for Aurizon Network to amend its 2017 DAU. It is a summary only and it should be read together with the full reasons set out in the remainder of this decision.

Part A—Risk, revenues and reference tariffs

Aurizon Network's 2017 DAU proposed allowable revenues for coal-carrying train services are based on the components outlined in the table below. Aurizon Network proposed total allowable revenue of $4,892 million over the UT5 pricing period. The QCA's decision provides total allowable revenues of $4,123 million over the UT5 pricing period, which is $769 million, or 16 per cent lower, than Aurizon Network's proposal.

The QCA's assessment of allowable revenues is set out in the table below.

Table 1 Aurizon Network's UT5 approved and proposed allowable revenues ($'million, nominal)

Building block	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total (QCA Decision)*	*Total (AN proposed)*	*Total (Draft Decision)*
Return on capital	344	347	348	343	1,381	1,592	1,289
Depreciation (less inflation)	219	224	309	283	1,034	1,141	899
Maintenance expenditure	213	220	152	155	739	921	817
Operating expenditure	190	191	205	209	795	855	743
Tax allowance	34	35	53	49	170	328	141
Subtotal	999	1,017	1,066	1,039	4,120	4,838	3,888
2016 Undertaking capital carryover account	1	1	1	1	3	54	5
Total UT5 pricing period	**1,000**	**1,017**	**1,066**	**1,040**	**4,123**	**4,892**	**3,893**

Note: Numbers may not add due to rounding. Figures exclude revenue-cap adjustments and cost pass-through applications.

The key elements of the components used for deriving the QCA's approved allowable revenues and reference tariffs are discussed briefly below.

The regulatory asset base and depreciation

Aurizon Network proposed an opening regulatory asset base (RAB) of $5,952 million. The QCA has adjusted Aurizon Network's opening RAB to reflect updated capital expenditure and indexation since its 2017 DAU was submitted.

The QCA considers that it is appropriate to discontinue various revenue/capital deferrals, including those associated with previous investments in the Moura and GAPE Systems.

The capital indicator for forecast capital expenditure, which is subject to annual *ex post* approval by the QCA, is proposed to be increased for the UT5 pricing period to account for the capitalisation of ballast undercutting renewal costs from 2019–20.

Rate of return

The QCA's decision provides for a rate of return of 5.7 per cent. Aurizon Network proposed a nominal post-tax weighted average cost of capital (WACC) of 6.78 per cent in its 2017 DAU and 7.03 per cent in its March 2018 submission.

The QCA has assessed Aurizon Network's WACC, relying on both a bottom-up assessment of individual WACC parameters and the overall reasonableness of the resulting WACC and, for the reasons set out in the decision, decided that Aurizon Network's WACC is not appropriate to approve.

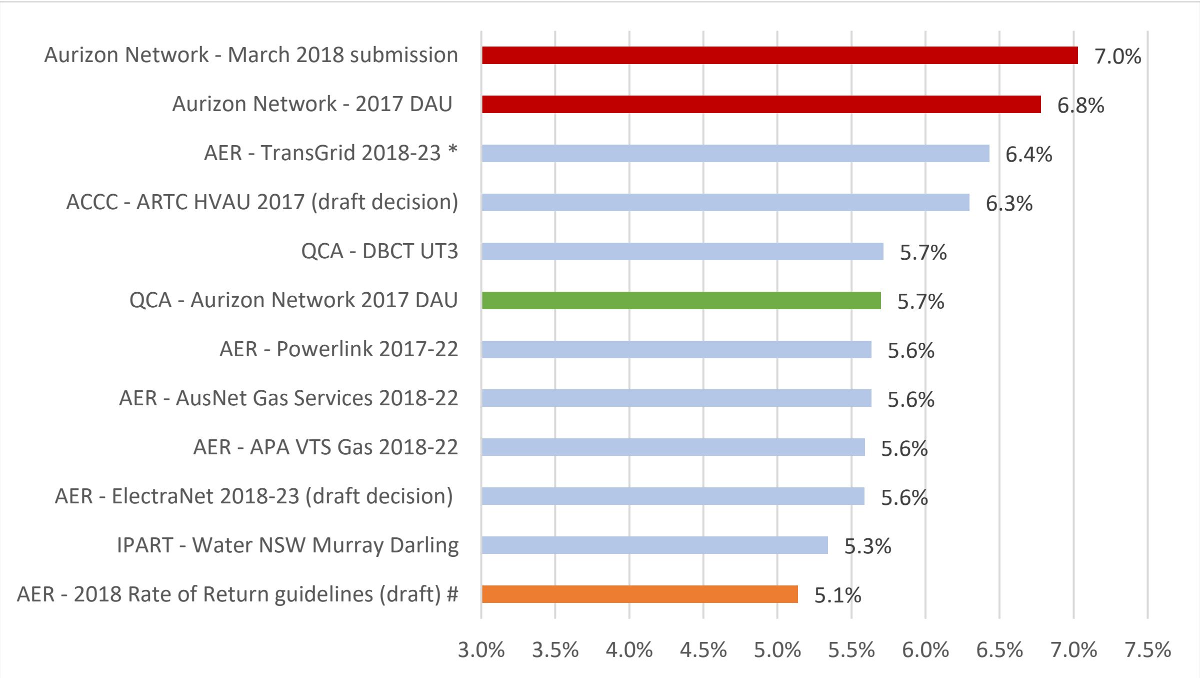
In determining what the QCA considers is the appropriate WACC, the QCA has had regard to the bottom-up WACC assessment of individual parameters of 5.45 per cent which provides a framework for estimating an appropriate rate of return for Aurizon Network. The QCA has also exercised judgement with reference to the 5.45 per cent and given consideration to alternative approaches adopted by other Australian regulators.

The QCA's decision has also taken into consideration, amongst other things, the:

- risk of Aurizon Network's legitimate business interests not being satisfied, arising from the bottom-up assessment using the proposed averaging period
- asymmetric consequences of setting a WACC that is not commensurate with the Aurizon Network's commercial and regulatory risks
- uncertainty inherent in estimating a WACC for the provision of access to the CQCN.

In addition, the QCA has compared its decision with other regulatory decisions normalising for timing differences, associated with the averaging period. The QCA's comparative analysis highlights that the QCA's decision is well within the reasonable range of comparators.

Figure 1 Normalised WACC comparison of relevant regulatory decisions on infrastructure networks in Australia



Source: NineSquared 2018 and QCA analysis. Numbers shown are rounded for presentation purposes.

*Notes: * TransGrid's cost of debt calculation has not been normalised and incorporates historical information as it continues its transition toward a trailing average cost of debt. Due to uncertainties associated with the confidential averaging periods used to estimate TransGrid's cost of debt, the AER's cost of debt estimate of 6.01 per cent has been applied for the first regulatory year. # The QCA's estimate of the AER's Draft 2018 Rate of Return guidelines is indicative only.*

Forecast inflation and RAB indexation

The QCA considers that the approach of using Reserve Bank of Australia (RBA) forecasts where available and the mid-point of the RBA target band in later years provides for the best unbiased inflation forecast. This method resulted in an inflation forecast of an average 2.37 per cent for the UT5 pricing period.

The QCA considers it appropriate to use forecast inflation to deduct inflationary gain from nominal revenues and actual inflation to index the RAB for roll-forward purposes.

Volumes

The QCA's decision is based on the volume forecasts for the CQCN contained in Table 2**.** Annual forecast volumes of 231 million tonnes in 2017–18 are forecast to increase to 249 million tonnes in 2020–21, representing an 8 per cent increase for the CQCN over the period with the largest forecast increase in the Moura System (being 43 per cent).

Table 2 Volume forecasts by system (million tonnes)

System	***2017–18***	***2018–19***	***2019–20***	***2020–21***
Blackwater	64.60	67.18	68.18	69.18
Goonyella	127.55	130.95	131.45	131.45
Moura	11.50	15.00	16.50	16.50
Newlands (excluding GAPE)	11.70	13.20	13.20	13.20
GAPE	15.85	18.85	18.85	18.85
Total	**231.20**	**245.18**	**248.18**	**249.18**

Operating cost allowance

The QCA's decision establishes an operating expenditure allowance of $795 million, compared with the $855 million proposed by Aurizon Network in its 2017 DAU.

Our analysis adopted 2015–16 as the appropriate forecasting base year, rather than 2014–15. The net reduction to Aurizon Network's proposed allowance is largely due to updated transmission and connection costs and changes in cost allocations. We also made reductions to proposed insurance costs, overhead allowances for corporate accommodation and shared IT services, and applied a notional allocation of overall operating costs to non-coal services.

Aurizon Network's 2017 DAU also included proposed reference tariff components to recover the costs of supplying electricity to electric traction customers. These costs have increased significantly since Aurizon Network submitted its 2017 DAU. We have accepted an updated electric energy cost projection from Aurizon Network, noting that its approach to purchasing electric energy has the endorsement of industry, and costs are subject to a symmetrical *ex post* true-up under Aurizon Network's 2017 DAU.

Maintenance cost allowance

The QCA's decision provides a maintenance cost allowance of $739 million, with a corresponding increase in the capital indicator of $159.1 million for the capitalisation of ballast undercutting renewal costs. Combined, this provides an approved total of $898.1 million for the UT5 pricing period. By way of comparison, Aurizon Network's 2017 DAU proposed a maintenance cost allowance of $920.6 million.

The QCA has adopted the direct maintenance costs proposed in Aurizon Network's March 2018 submission for all cost categories. However, the QCA considers it is appropriate for ballast undercutting renewal costs to be classified as a capitalised item and included in the capital indicator in 2019–20 and 2020–21. In these years, ballast undercutting renewal costs will be subject to the *ex post* prudency and efficiency assessment and capital expenditure carryover account provisions under Schedule F of Aurizon Network's 2017 DAU. This will present Aurizon Network with appropriate incentives to incur efficient costs.

Schedule F—Reference tariffs and take-or-pay

The QCA requires the revenue cap to be amended, to provide for an adjustment where Aurizon Network has wilfully breached its obligation to use reasonable endeavours to minimise disruption to train services.

Part B—Draft access undertaking provisions

Part 1: Preamble and Part 2: Intent and Scope

The QCA considers amendments must be made to Part 1 and Part 2 of Aurizon Network's 2017 DAU to reflect the statutory circumstances in which the UT5 undertaking was submitted and will ultimately be approved. The 'Terminating Date' must be amended so that it is clear that the UT5 undertaking will continue to apply if the Minister makes a new declaration in relation to all or part of the relevant service.

Also the QCA requires the definition of the 'Adjustment Date' be amended to reflect the commencement of the UT5 pricing period (to 1 July 2017).

Part 3: Ring-fencing

The QCA considers it is appropriate to approve the Part 3 ring-fencing arrangements and the Schedule D Ultimate Holding Company Support Deed of Aurizon Network's 2017 DAU.

Part 4: Negotiation Framework

The QCA considers it is appropriate to approve the Part 4 principles and procedures for the negotiation of access rights and associated Schedules, A, B, C, H and I of Aurizon Network's 2017 DAU.

Part 5: Access Agreements

The QCA considers amendments must be made to Aurizon Network's 2017 DAU to clarify how disputes in relation to the negotiation of the terms of an Access Agreement and Train Operations Deed are to be determined.

The QCA considers amendments must be made to Aurizon Network's 2017 DAU Standard Agreements to reflect the consensus drafting agreed between Aurizon Network and the QRC developed as part of the collaborative submission process.

The QCA considers it is appropriate for amendments to be required to reflect Aurizon Network's obligation to use reasonable endeavours to minimise disruption to train services.

Part 6: Pricing Principles

The QCA considers amendments must be made to Aurizon Network's 2017 DAU to reflect the consensus drafting developed as part of the collaborative submission process. A key amendment was to exclude minor amendments to the Standard Access Agreement (such as minor variations to payment terms or amendments to insurance requirements) from the definition of access conditions in Part 12.

Part 7: Available Capacity Allocation and Management

The QCA considers amendments must be made to Aurizon Network's 2017 DAU to reflect the consensus drafting developed as part of the collaborative submission process in respect of capacity relinquishment processes, due to increased maximum payloads and transfers of access rights (including short-term transfers).

Part 7A: Capacity and Supply Chain Management

The QCA considers amendments must be made to Aurizon Network's 2017 DAU to ensure Aurizon Network uses reasonable endeavours to minimise disruption to train services when planning and implementing operational constraints on the network. Related changes to the revenue cap adjustment and standard agreements linked to this obligation are also required.

The QCA considers amendments must be made to Aurizon Network's 2017 DAU to require Aurizon Network to participate in the development of supply chain productivity improvement initiatives, where reasonable to do so.

The QCA considers amendments must be made to Aurizon Network's 2017 DAU to reflect consensus drafting developed as part of the collaborative submission process, including for a new annual assessment of system capacity (for information purposes).

The QCA also considers amendments must be made to Aurizon Network's 2017 DAU so that capacity assessments are subject to 'review' by an independent expert rather than an 'audit'. For annual assessments, Aurizon Network should identify changes since the previous capacity assessment, whether changes to assumptions are required, and the appropriate application of assumptions.

Part 8: Network Development and Expansions

The QCA considers it is appropriate to approve Aurizon Network's proposed 2017 DAU framework for investing in network expansions, subject to requiring an obligation for Aurizon Network to negotiate non-price terms sought by access seekers 'in good faith'.

The QCA considers amendments must be made to Aurizon Network's 2017 DAU to exclude the development and review of a standard user funding agreement. At this time, the QCA considers sufficient information is available to provide for a negotiated user funding agreement, with recourse to binding arbitration by the QCA where the parties cannot agree.

Part 9: Connecting Private Infrastructure

The QCA considers amendments must be made to Aurizon Network's 2017 DAU to reflect consensus drafting developed as part of the collaborative submission to include a process for the development of a revised Standard Rail Connection Agreement, and to include provisions that clarify how the new agreement will apply.

The QCA also considers amendments must be made to Aurizon Network's 2017 DAU to clarify that a dispute in relation to the terms of a rail connection agreement (not including the completion of the schedules) is resolved by the parties entering into the Standard Connection Agreement or the revised Standard Connection Agreement (as the case may be).

Part 10: Reporting, Compliance and Audits

The QCA considers it is appropriate to approve Part 10 reporting, compliance and audit arrangements of Aurizon Network's 2017 DAU subject to the QCA's appropriate reporting requirements to provide information about train services that have been disrupted as a result of Aurizon Network imposing operational constraints.

Part 11: Dispute Resolution and Decision Making

The QCA considers amendments must be made to Aurizon Network's 2017 DAU to, amongst other things, allow parties to commence disputes in relation to Aurizon Network's obligations under its undertaking, to filter out disputes that are vexatious or an abuse of process, and require disputes arising in relation to particular matters that are expressly referred to in Part 11, to be resolved in accordance with Part 11.

The QCA also considers that before a determination by the QCA can commence, the parties must agree, in a legally binding way, to be bound by the outcome of the dispute, including agreeing to pay the costs of another party to the dispute as ordered by the QCA.

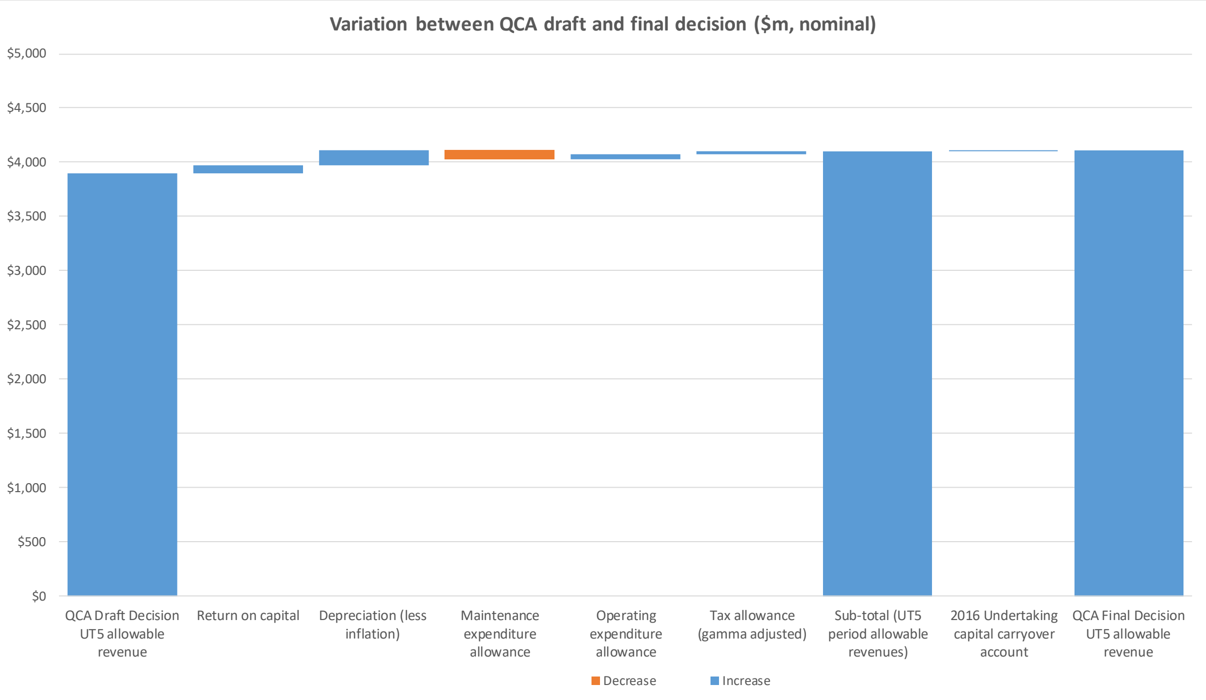
Key differences from the QCA's draft decision

In December 2017, as part of the QCA's consultation process the QCA released a draft decision outlining its preliminary views on Aurizon Network's 2017 DAU to give stakeholders an insight into those views to encourage further contributions prior to making this decision.

Since then, the QCA has received stakeholder submissions in response to the draft decision and received further submissions on Aurizon Network's proposal to change the averaging period and its maintenance allowance and practices. Aurizon Network has also provided additional information in response to QCA information requests.

Cost drivers

The figure below shows the variation from the QCA's preliminary views on allowable revenue outlined in its draft decision compared to this decision.



The key drivers of this decision's maximum allowable revenue of $4,123 million, compared to the QCA's draft decision of $3,893 million, representing an increase of 6 percent, arises from:

- a WACC of 5.7 per cent, representing an increase of 29 basis points compared to the QCA's draft decision
- an increase of $92 million for the return on capital ($1,381 million) due to the QCA's proposed WACC as well as the inclusion of previously deferred investments in the Moura and GAPE Systems
- a net increase in allowable revenues for ballast undercutting renewal costs of $44 million, comprising:
  - increases in maintenance expenditure in 2017–18 and 2018–19 based on Aurizon Network's March 2018 direct maintenance claims

  - increases in depreciation charges to reflect transitional arrangements in the capital indicator for 2019–20 and 2020–21, with corresponding reductions to maintenance allowances to account for this

- a net increase of $52 million in operating costs, arising primarily from the approval of step changes and revised allocation approaches, where Aurizon Network provided further supporting information and justification
- an increase for tax allowances in light of the QCA's increase to the WACC of 5.7 per cent.

Rate of return

The QCA's decision on the rate of return is 29 basis points higher than the draft decision — 5.7 per cent for the UT5 pricing period compared to the draft decision of 5.41 per cent (Chapter 5).

This difference is largely due to the QCA recognising that mechanistically applying bottom-up assessment of individual WACC parameters will not necessarily ensure an appropriate overall WACC. The QCA has assessed Aurizon Network's proposed WACC, employing both a bottom-up assessment of individual WACC parameters and an assessment of the overall appropriateness of the resulting WACC, having regard to the statutory assessment criteria in the QCA Act.

The QCA's decision has, amongst other things, taken into consideration:

- a bottom-up assessment of individual WACC parameters (estimated at 5.45 per cent)
- the risk of Aurizon Network's legitimate business interests not being satisfied, arising from estimating the WACC using a bottom-up assessment for the proposed averaging period
- the asymmetric consequences of setting a WACC that is not commensurate with Aurizon Network's commercial and regulatory risks
- uncertainty inherent in estimating a WACC for the provision of access to the CQCN.

In arriving at a WACC of 5.7 per cent, the QCA has exercised judgement with reference to a bottom-up assessment of individual WACC parameters and has given consideration to approaches adopted by other Australian regulators—the use of a 10-year bond to estimate the risk-free rate; and the use of independent third party data to estimate the debt risk premium.

Cessation of capital/revenue deferrals

Capital investments associated with WIRP and GAPE projects are included in the determination of reference tariffs and allowable revenues for the UT5 pricing period (Chapter 3). These capital investments were not included in the draft decision as they were not proposed by Aurizon Network.

In reaching this decision, the QCA has considered new information to conclude:

- the period of initial uncertainty with forecast volumes due to ramp-up issues has passed and it has become clearer the extent of railings forecast to materialise
- relevant beneficiaries from these investments have been identified (for example, in the Moura System where forecast volumes support a socialised reference tariff after inclusion of these investments).

Operating cost allowance

The QCA's decision provides an operating expenditure allowance of $795 million over the UT5 pricing period, which is around $50 million (7 per cent) more than the draft decision (Chapter 7).

This difference is primarily the result of accepting revised cost allocation approaches for some costs (sections 7.5.3 and 7.6.3); providing allowances for additional step changes where further supporting information and justification has been provided (sections 7.5.4 and 7.6.4); the transitional reclassification of some costs from capital expenditure to corporate overhead (section 7.6.3); updated transmission cost forecasts (section 7.8); and the application of a general allocation of costs to non-coal services to recognise their contribution to total operating costs (section 7.11).

Maintenance cost allowance

The QCA's decision differs from the draft decision, due to acceptance of Aurizon Network's March 2018 submission for proposed direct costs (section 8.5.1) and the transitional reclassification of ballast undercutting renewal costs to capital expenditure from FY2020 (section 8.5.3).

The QCA's decision on ballast undercutting renewal costs (accounting for 33 per cent of the direct cost allowance) provides a net increase of $44 million above the draft decision, comprising of increases in:

- maintenance expenditure in 2017–18 and 2018–19 based on Aurizon Network's March 2018 direct maintenance claims
- depreciation charges to reflect transitional arrangements in the capital indicator for 2019-20 and 2020-21, with corresponding reductions to maintenance allowances to account for this.

The result is a maintenance allowance of $739 million with a corresponding increase in capital expenditure of $159 million, totalling $898 million. This is compared to the QCA's draft decision which provided a maintenance cost allowance of $817 million.

Maintenance and operating practices

Since the draft decision, the QCA has identified the need for appropriate amendments to Aurizon Network's 2017 DAU to address concerns around Aurizon Network's stated approach to maintaining and operating the declared service. After taking into consideration specific comments from Aurizon Network and others, the QCA considers it appropriate to include amendments to Aurizon Network's 2017 DAU to:

- require Aurizon Network to use reasonable endeavours to minimise disruption to train services when planning and implementing operational constraints on the network (section 17.11)
- provide for an adjustment to the revenue cap arrangements where Aurizon Network has wilfully breached its obligation to minimise disruption to train services (section 9.3.4)
- amend the standard access agreement and standard train operations deed to reflect Aurizon Network's obligation to minimise disruption to train services and the consequences for wilfully breaching this obligation (section 14.3)
- amend the reporting requirements to provide information about train services that have been disrupted to affected parties and the QCA (section 20.2).

User funding arrangements

The QCA has accepted Aurizon Network's March 2018 submission to not include provisions for the development and review of a standard user funding agreement (Chapter 18). This is on the basis that the development of standard agreements to underpin the user funding framework is not required in an access undertaking for the remainder of the UT5 regulatory period. Parties have recourse to binding arbitration by the QCA where the parties cannot agree a user funding agreement.

2017 DAU provisions

The QCA has also refined and developed its views on other aspects of Aurizon Network's 2017 DAU provisions since the draft decision, reflecting stakeholder comments, new information and the outcomes of other regulatory processes. Key changes include:

- additional amendments to Aurizon Network's 2017 DAU provisions that:

  - require Aurizon Network to use actual inflation (not forecast inflation) for the roll-forward of the RAB (Chapters 4 and 15)
  - require Aurizon Network to participate in the development of supply chain productivity improvement initiatives, where reasonable to do so (Chapter 17)
  - require Aurizon Network to negotiate non-price terms sought by access seekers 'in good faith' (Chapter 18)
- revisions to amendments proposed in the draft decision that:
  - clarify how disputes in relation to the negotiation of the terms of an Access Agreement and Train Operations Deed are to be determined (Chapter 14)
  - clarify that disputes about capacity deficits will be resolved in accordance with Part 11, except disputes about a decision by Aurizon Network not to fund an expansion (Chapter 17)
  - require the QCA to not be inconsistent with Aurizon Network's safety management system when making decisions about particular types of disputes (Chapter 21)
- no longer requiring Aurizon Network to include provisions:
  - for a baseline capacity review, on the basis that this process has been completed under its 2016 Undertaking (Chapter 17)
  - for feasibility funders to adopt user funding for an expansion even where Aurizon Network provides notice of its willingness to fund that expansion on regulatory terms, on the basis that an obligation to negotiate in good faith will promote an equitable negotiation process for non-price terms which may be sought by access seekers (Chapter 18)
  - for access seekers to hold Aurizon Network accountable for capacity shortfalls resulting from an Aurizon Network default or negligent act, on the basis that relevant parties are able to negotiate such terms as part of an Aurizon Network expansion (Chapter 18).

Contents

INTRODUCTION

Declaration for third party access

Aurizon Network is the access provider of a declared service for the purposes of Queensland's third party access regime established under Part 5 of the *Queensland Competition Authority Act 1997* (QCA Act).

The relevant service is 'the use of a coal system for providing transportation by rail' (as defined under s. 250 of the QCA Act) and is referred to in this decision as the 'declared service'. The relevant infrastructure to which the declared service relates is collectively referred to in this decision as the 'central Queensland coal network' (CQCN).

Because of this declaration, Aurizon Network (as the access provider for the declared service) and access seekers are subject to various rights and obligations under the QCA Act, including an obligation to negotiate access to the service in good faith (s. 100).

The regime also provides for the development of an access undertaking, which is defined under the QCA Act as 'a written undertaking that sets out details of the terms on which an owner or operator of the service undertakes to provide access to the service whether or not it sets out other information about the provision of access to the service'.

These terms and conditions must necessarily deal with price and non-price matters. An undertaking approved by the QCA is intended to establish binding provisions to guide negotiation. It has the legal effect of constraining the QCA from making a determination in relation to an access dispute which is inconsistent with the approved undertaking (s. 119) and providing the owner with safe harbour from provisions of the QCA Act which prohibit preventing or hindering access (ss. 104 and 125).

Structure of this decision

This decision provides the QCA's assessment and reasons for the QCA's decision to not approve Aurizon Network's 2017 DAU.

Throughout this decision, summary boxes have been used to summarise the main elements of the QCA's decision on various matters. These summary boxes are for guidance purposes only. The reasons for the QCA's decision and the amendments to Aurizon Network's 2017 DAU the QCA considers appropriate are set out in the relevant sections of this decision and its appendices, including the Amended 2017 DAU at Appendix H.

This decision is structured as follows.

Part A: Risk, revenues and reference tariffs—provides an overview of the QCA’s investigation into Aurizon Network's proposed CQCN allowable revenues and reference tariffs for coal-carrying train services for the UT5 pricing period.

Chapters 2 to 9 focus on the key inputs used to develop reference tariffs and allowable revenues, including:

- Aurizon Network’s overall exposure to risk and the mechanisms within the regulatory framework to compensate, allocate and mitigate risk (Chapter 2)
- Aurizon Network’s regulatory asset base (RAB), including the opening asset value, forecast capital expenditure and the treatment of depreciation (Chapter 3)
- Inflation forecasting and the method for RAB indexation (Chapter4)

- Rate of return, including a detailed assessment of Aurizon Network's WACC to apply for the UT5 pricing period (Chapter 5 and Appendix F)
- Volume forecasts that are taken into account to derive allowable revenues and reference tariffs for the CQCN (Chapter 6)
- Operating cost allowance included within allowable revenues and reference tariffs (Chapter 7)
- Maintenance cost allowance included within allowable revenues and reference tariffs (Chapter 8)
- Determination of reference tariffs and take-or-pay arrangements (Chapter 9).

Part B: DAU provisions—provides an assessment of Aurizon Network's proposed 2017 DAU provisions.

Chapters 11 to 21 respond to Aurizon Network's 2017 DAU proposals including:

- The Preamble (Part 1) and Intent and Scope (Part 2)—establishing the high-level context, objectives and matters relevant to the overall operation of the undertaking (Chapter 11)
- Ring-fencing (Part 3)—establishing a ring-fencing framework that prevents Aurizon Network from using its position or confidential information to favour its related parties, to the detriment of competition in upstream or downstream markets (Chapter 12)
- Negotiation Framework (Part 4)—setting out the key steps in the negotiation process and the information access seekers and Aurizon Network may be required to provide in the negotiation of access rights (Chapter 13)
- Access Agreements (Part 5)—establishing the framework for the development of access agreements, including the standard terms on which Aurizon Network will provide access (Chapter 14)
- Pricing Principles (Part 6)—setting out the principles to apply when developing access charges and reference tariffs (Chapter 15)
- Available Capacity Allocation and Management (Part 7)—establishing the general principles and procedures for allocating and managing capacity available on the network (Chapter 16)
- Capacity and Supply Chain Management (Part 7A)—setting out matters relating to Network Management Principles (NMPs), supply chain coordination and capacity assessments (Chapter 17)
- Network Development and Expansions (Part 8)—establishing a framework for development and funding for expansions of the CQCN (Chapter 18)
- Connecting Private Infrastructure (Part 9)—setting out the process for the connection of private infrastructure to the CQCN (Chapter 19)
- Reporting, Compliance and Audits (Part 10)—establishing a framework for information reporting and demonstrating compliance with the undertaking (Chapter 20)
- Dispute Resolution and Decision Making (Part 11)—establishing a dispute resolution mechanism and setting out the requirements to apply (Chapter 21).

Appendix H: Amended 2017 DAU—sets out the amendments that Aurizon Network must make to have its 2017 DAU approved.

THE QCA'S APPROACH TO THIS INVESTIGATION

The QCA's task is to assess Aurizon Network's 2017 DAU based on the available evidence and information, having regard to the statutory assessment criteria and either approve or refuse to approve the draft access undertaking.

Ultimately, the success of this approach depends on Aurizon Network and other interested parties adopting reasonable and balanced positions, and accepting responsibility for advancing these positions with supporting information and merit-based arguments that are verifiable.

Assessment of Aurizon Network's 2017 DAU

The QCA has considered Aurizon Network's 2017 DAU in accordance with the statutory assessment criteria in s. 138(2) and other applicable requirements of the QCA Act. In some cases, the assessment of whether it is appropriate to approve Aurizon Network's 2017 DAU having regard to the factors listed in s. 138(2) gives rise to competing considerations. In such cases, the QCA has weighed up the competing considerations as appropriate.

The QCA has also given consideration to submissions received from stakeholders, when assessing Aurizon Network's 2017 DAU.[1]

In assessing Aurizon Network's 2017 DAU, the QCA has considered Aurizon Network's 2017 DAU afresh and has had regard to the s. 138(2) factors in every aspect of this decision. In considering each aspect of Aurizon Network's 2017 DAU, the QCA's decision has sought an appropriate balance between competing interests and provided reasons for the decision with reference to the issues that are relevant to each of the s. 138(2) factors.

Assessment criteria

In accordance with s. 134 of the QCA Act, the QCA must consider Aurizon Network’s 2017 DAU and either approve, or refuse to approve, it. In doing so, the QCA must publish Aurizon Network’s 2017 DAU and consider comments on it.

If the QCA refuses to approve Aurizon Network’s 2017 DAU, it must provide a written notice stating the reasons for the refusal and the way in which the QCA considers it is appropriate to amend Aurizon Network’s 2017 DAU.

The factors affecting the QCA’s consideration and approval of a draft access undertaking are set out in the QCA Act.

The QCA Act

The QCA Act provides that the QCA may approve a draft access undertaking only if it considers it appropriate to do so having regard to the matters mentioned in s. 138(2).

Section 138(2) of the QCA Act states that the QCA may approve a draft access undertaking only if it considers it appropriate having regard to each of the following:

(a) the object of Part 5 of the QCA Act, which is:

> to promote the economically efficient operation of, use of and investment in, significant infrastructure by which services are provided, with the effect of promoting effective competition in upstream and downstream markets (s. 69E).

[1] A list of submissions is provided at Appendix A.

(b) the legitimate business interests of the owner or operator of the service;

(c) if the owner and operator of the service are different entities—the legitimate business interests of the operator of the service are protected;

(d) the public interest, including the public interest in having competition in markets (whether or not in Australia);

(e) the interests of persons who may seek access to the service, including whether adequate provision has been made for compensation if the rights of users of the service are adversely affected;

(f) the effect of excluding existing assets for pricing purposes;

(g) the pricing principles in s. 168A of the QCA Act, which in relation to the price of access to a service are that the price should:

  (i) 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; and

  (ii) allow for multi-part pricing and price discrimination where it aids efficiency; and

  (iii) not allow a related access provider to set terms and conditions that discriminate in favour of the downstream operations of the access provider or a related body corporate of the access provider, except to the extent the cost of providing access to other operators is higher; and

  (iv) provide incentives to reduce costs or otherwise improve productivity;

(h) any other issues the QCA considers relevant.

Section 138(3) of the QCA Act provides, among other things, that the QCA may approve the draft access undertaking only if it is satisfied the proposed undertaking:

(a) is consistent with any access code for the service; and

(b) is not inconsistent with a ruling relating to the service that is in effect under Part 5, Division 7A of the QCA Act.

There are no applicable access codes or rulings in effect under Division 7A.

Framework for the QCA's assessment

In December 2016, the QCA commenced its investigation to decide whether to approve, or refuse to approve, Aurizon Network's 2017 DAU.

The framework for the QCA's assessment centres around robust and fact-based decision-making, which is based on predictable and transparent processes. This has involved processes for gathering information, providing opportunities for collaboration between stakeholders and delivering timely decisions.[2]

Consultation

Effective consultation with interested parties is integral to achieving a balanced and transparent regulatory process, as well as supporting accountability and confidence in the QCA's decision-making.

The QCA has consulted extensively on Aurizon Network's 2017 DAU. Interested parties had various opportunities to put forward their views on Aurizon Network's proposal and the QCA's preliminary position and to respond to other targeted consultation papers that dealt with specific issues that emerged

[2] QCA 2016f—The QCA's *Statement of Regulatory Intent* outlines the approach to managing information gathering processes, stakeholder consultation and assessment timeframes.

through the assessment process.[3] The QCA has also sought additional information from Aurizon Network through informal and formal information requests, where this was necessary.[4]

The information provided has assisted the QCA to better understand Aurizon Network's proposal, the objectives it is seeking to achieve and the way it intends to achieve them, and the potential impacts on other parties.

Provision of late information

In some instances, parties responded to the QCA's requests for submissions, information or comment after the QCA's stated deadline had passed.

The QCA has considered whether to take into account late information on a case-by-case basis, in accordance with the QCA Act. Where the QCA has had regard to late information, it published a stakeholder notice to disclose that such information was provided and would be taken into account.

Draft decision—building on the QCA's preliminary views

In December 2017, as part of the QCA's consultation process the QCA released a draft decision outlining its preliminary views on Aurizon Network's 2017 DAU to give stakeholders an insight into those views to encourage further contributions.

This decision has been informed by stakeholders' responses to the draft decision, along with other consultative processes. On that basis, the QCA has developed its thinking around the application of statutory assessment criteria and refined its views on Aurizon Network's proposal and its decisions as to how to amend Aurizon Network's 2017 DAU in order for it to be approved.

Consideration of consensus positions between Aurizon Network and stakeholders

The QCA has sought to promote collaboration between stakeholders during this process. The QCA appreciates the efforts made by stakeholders to collaborate, discuss and, where possible, reach a consensus on certain issues.

The QCA has had regard to consensus positions reached amongst stakeholders as part of its assessment of Aurizon Network's 2017 DAU. The significance of consensus positions depends (amongst other things) on the matter involved, the stakeholders involved and the level of support expressed. The QCA has given more weight to consensus positions with greater, more widespread and extensive support from stakeholders. However, the QCA has not accepted a position merely because it had been agreed with some or all existing stakeholders, nor has the QCA focussed its assessment on matters in dispute between Aurizon Network and stakeholders. The QCA has considered the effect of a draft access undertaking, in its entirety and having regard to the statutory criteria in s. 138(2) of the QCA Act, including the effect on all stakeholders including future access seekers, who will not necessarily be represented by the stakeholders that have developed consensus positions. Accordingly, while the existence of consensus positions is persuasive, it is not decisive.

Overwhelmingly, the QCA has considered that the consensus positions submitted as part of the collaborative process[5] are appropriate to approve for the purposes of s. 138(2) of the QCA Act. While the

[3] For example, the QCA used targeted consultation where there was a benefit from obtaining stakeholder views on matters when new issues emerged or new information came to light (such as in response to Aurizon Network's revised maintenance claim and its proposal to change the averaging period).

[4] For example, the QCA requested Aurizon Network provide additional information to better support its claims (including the necessary supporting information to justify its maintenance claim and the allocation of costs for its operating expenses).

QCA has identified a limited number of instances where further amendments are required, by and large, these maintain the policy objectives advanced in the collaborative process.

Consideration of expert advice

The QCA engaged various independent consultants to provide assistance and specialist expert opinion in undertaking its assessment of Aurizon Network's 2017 DAU. While the QCA has had regard to the advice provided, it has not simply adopted proposed views, recommendations or analysis. Rather, any advice provided is one input into the QCA's assessment task.

Consideration of Aurizon Network's 2016 Undertaking

The QCA notes that Aurizon Network's 2017 DAU has been developed from, and shares similar drafting to, Aurizon Network's 2016 Undertaking, which was voluntarily submitted by Aurizon Network, and approved in October 2016. Despite such similarities, the QCA has considered Aurizon Network's 2017 DAU afresh in accordance with the requirements of the QCA Act.

Timeframes

On 11 May 2016, the QCA issued an initial undertaking notice to Aurizon Network under s. 133 of the QCA Act, requiring Aurizon Network to submit a draft access undertaking to the QCA for the period commencing 1 July 2017, by 9 September 2016.

The QCA considered that initiating the process established by s. 133 of the QCA Act was the best way of achieving a timely replacement access undertaking for the UT5 regulatory period.

Following a request from Aurizon Network, the date for lodgement of the draft access undertaking was extended to 30 November 2016.

On 30 November 2016, the QCA received Aurizon Network's 2017 DAU. The QCA subsequently issued a notice commencing an investigation to decide whether to approve, or refuse to approve, Aurizon Network's 2017 DAU and invited written submissions by 17 February 2017. In addition to the initial consultation period, the QCA also provided stakeholders with an additional consultation period for collaborative stakeholder submissions.

During 2017 the QCA needed to seek further information from Aurizon Network in order to assess its proposal. The QCA also accepted and took into account information provided by Aurizon Network outside stated deadlines for providing information.

On 15 December 2017, the QCA released a draft decision to provide stakeholders with an insight into the QCA's preliminary views and encourage further contributions by way of submissions.

During 2018, the QCA released two targeted consultation papers—on maintenance matters and on Aurizon Network's proposal to revise the averaging period—requesting stakeholder comment to assist the decision-making process. The QCA also requested additional information to assess Aurizon Network's March 2018 submission that presented new proposals for the QCA's consideration.

On 31 August 2018, the QCA decided to delay making this decision, pending the resolution of the judicial review proceedings in the Supreme Court of Queensland that had been initiated by Aurizon Network.

On 30 October 2018 Aurizon Network's application was dismissed by the Supreme Court of Queensland.

[5] Immediately following the initial consultation period on Aurizon Network's proposal, the QCA provided stakeholders with an additional consultation period for stakeholders to present agreed positions to help inform the QCA's consideration and assessment of Aurizon Network's 2017 DAU.

QCA assessment phase

The QCA Act requires the QCA to use its best endeavours to decide whether to approve or not approve a draft access undertaking within six months, excluding:

- periods where stakeholders are responding to notices given under s. 185 of the QCA Act requiring information or documents to be provided
- consultation periods on the DAU or other documents the QCA has invited submissions on
- other periods Aurizon Network agrees with the QCA should be excluded.

The QCA has met this requirement.

Factors that influenced the timeliness of the regulatory process

In managing this regulatory process, the QCA has sought to deliver a predictable and transparent process that leads to timely decision-making, based on robust analysis, in accordance with the requirements of the QCA Act.

Over the course of this process, a significant amount of time was spent firstly by Aurizon Network in preparing its proposal and supporting documentation in response to the initial undertaking notice, then through the QCA's consultation processes and follow-up information requests.

The QCA maintains that it is important to provide adequate time for consultation so that stakeholders can prepare quality submissions, including collaborative submissions. However, the QCA found that in a number of cases the information provided was insufficient for the QCA to form a view on the merits of Aurizon Network's proposal and this required further information to inform its investigation.

It becomes difficult to run an efficient assessment process when sufficient information is not provided in a timely manner. It can lead to unplanned delays from having to seek additional information and clarification or from having to seek alternative sources of relevant information for the QCA to base its analysis and decisions on.

During the course of the QCA's investigation, it became apparent that not effectively engaging within the QCA's process has consequential impacts on the timeliness and integrity of the process. The risk of unnecessary delay is reduced when all stakeholders: provide submissions and other information to sufficiently support their positions in a timely manner; and work together to collaborate, discuss and, where possible, reach a consensus on issues.

The QCA's decision was also delayed by Aurizon Network's judicial review application on the draft decision. The QCA intended to issue this decision in September 2018, but decided to delay making this decision, pending the outcome of court proceedings. The QCA did not make that decision lightly. While regrettable, the QCA considered this delay was unavoidable given Aurizon Network was continuing to pursue its judicial review application.

1 PART A: RISK, REVENUES AND REFERENCE TARIFFS—OVERVIEW

Overview (Part A)

The 2017 DAU includes provisions relating to allowable revenues and reference tariffs to be recovered from coal-carrying train services.[6] The QCA has considered all elements of Aurizon Network’s proposed allowable revenues and reference tariffs in making this decision, and this chapter provides an overview which should be read in conjunction with related aspects of this decision.

1.1 Aurizon Network's 2017 DAU proposal

Aurizon Network's 2017 DAU proposed allowable revenues, and therefore reference tariffs, for coal-carrying train services are based on the components in Table 3, and are shown on a system basis in Table 4.[7] This includes electric and non-electric allowable revenues.

Table 3 Aurizon Network's 2017 DAU proposed allowable revenue ($'million, nominal)

Building block	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total*
Return on capital	409	402	395	386	1,592
Depreciation (less inflation)	284	281	289	287	1,141
Maintenance expenditure	221	225	235	240	921
Operating expenditure	206	211	217	221	855
Tax allowance	78	81	85	85	328
Subtotal	1,198	1,201	1,220	1,219	4,838
2016 Undertaking capital carryover account[8]	13	13	14	14	54
Total UT5 pricing period[9]	1,211	1,214	1,233	1,233	4,892

Table 4 Aurizon Network's 2017 DAU allowable revenue by system ($'million, nominal)

System	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total*
Blackwater System	544	540	539	542	2,165
GAPE System	157	157	153	152	619
Goonyella System	430	434	454	449	1,766
Moura System	46	47	48	49	191
Newlands System	34	37	38	41	150
Total UT5 pricing period[10]	1,211	1,214	1,233	1,233	4,892

Notes: Numbers in the above tables may not sum due to rounding.

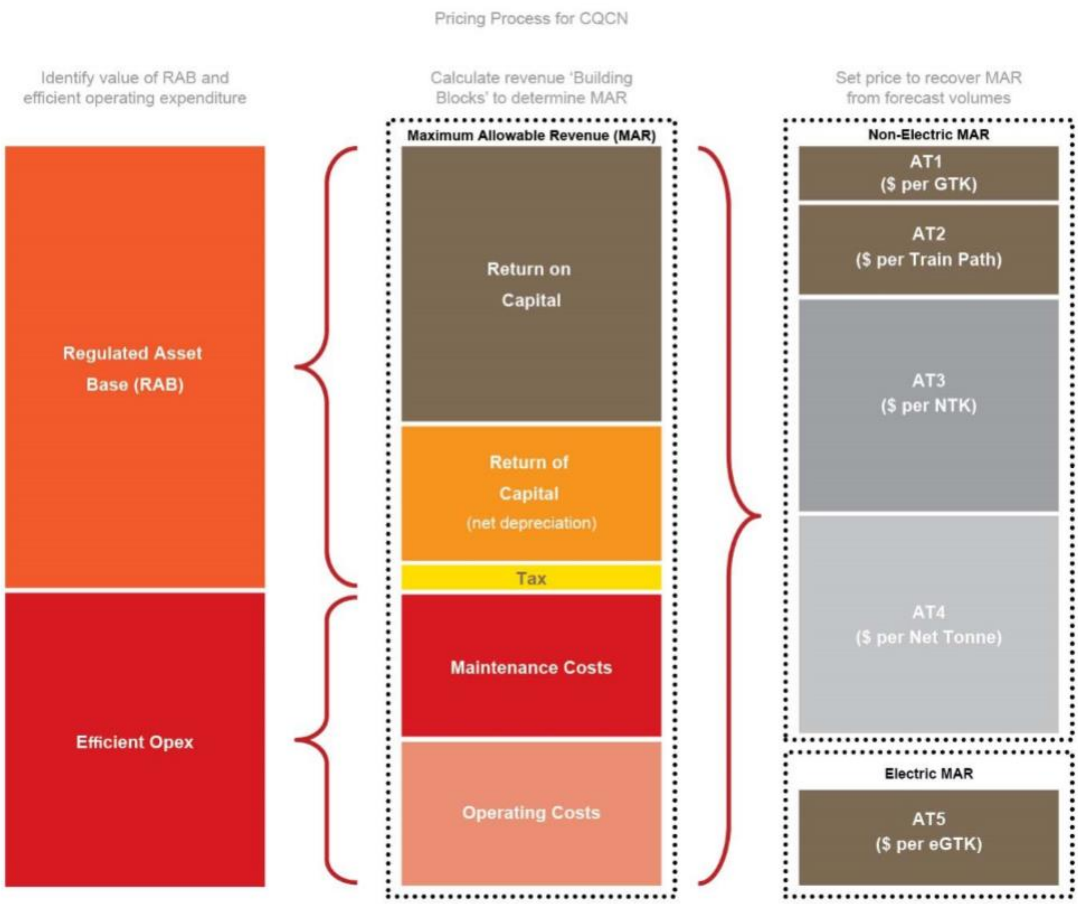
[6] The QCA's decision on other aspects of Aurizon Network's 2017 DAU are considered within Part B.
[7] Aurizon Network, sub. 1: 104–105.
[8] This includes adjustments that relate to revenue differences derived from approved capital expenditure against the capital indicator included in the 2016 Undertaking.
[9] Excludes revenue-cap adjustments and cost pass-through applications.
[10] Includes 2016 Undertaking capital carryover account adjustments and excludes revenue-cap adjustments and cost pass-through applications.

Aurizon Network submitted that the primary drivers of its 2017 DAU allowable revenues, compared to its 2016 Undertaking, related to:[11]

- a reduced total return on capital, with a lower WACC of 6.78 per cent offsetting the effects of an increased regulatory asset base due to the inclusion of expansion capital expenditure projects
- an increase in depreciation, less indexation, arising from inclusion of expansion capital expenditure projects and a forecast rate of inflation of 1.22 per cent
- increased maintenance costs due to additional infrastructure to be maintained and investment in new, more efficient mechanised maintenance plant
- a reduction in real terms in operating costs
- an increase in tax allowances (adjusted for imputation credits) due to a proposed gamma of 0.25.

Aurizon Network's 2017 DAU proposed allowable revenues and reference tariffs are based on a 'building block' approach (Figure 2).

Figure 2 Aurizon Network's building block and pricing approach



Source: Aurizon Network, sub. 1: 103.

[11] Aurizon Network, sub. 1: 104, 109–110.

QCA assessment approach

The QCA has assessed the various elements underpinning Aurizon Network's proposed building block components and the related pricing process (Figure 2).

The QCA's decision on Aurizon Network's 2017 DAU proposed allowable revenues and reference tariffs has been informed by Aurizon Network's 2017 DAU proposal and supporting documentation, assessment by independent consultants, and information provided by interested parties.[12]

1.2 QCA analysis and decision

Summary of decision 1.1

- **The QCA considers the appropriate way for Aurizon Network to amend its draft access undertaking is to apply allowable revenues and reference tariffs as outlined in Appendix B of this decision.**
- **The maximum allowable revenue over the UT5 undertaking period is $769 million less than Aurizon Network's proposal, for the reasons outlined in this decision.**

The QCA's decision is to refuse to approve the allowable revenue and reference tariffs as provided in Aurizon Network's 2017 DAU that are proposed to apply from 1 July 2017 for the UT5 pricing period.

Based on the QCA's analysis set out in the following chapters, the QCA considers that it is appropriate for Aurizon Network's 2017 DAU to be amended to provide for a maximum allowable revenue of $4.123 billion for the UT5 pricing period.

The QCA's decision on total allowable revenue[13] is around 16 per cent lower than the $4.89 billion initially proposed in Aurizon Network's 2017 DAU and around 13 per cent lower than the $4.76 billion sought in Aurizon Network's March 2018 submission which included a number of new cost proposals to be considered.

Key drivers for the QCA's decision compared to Aurizon Network's proposal

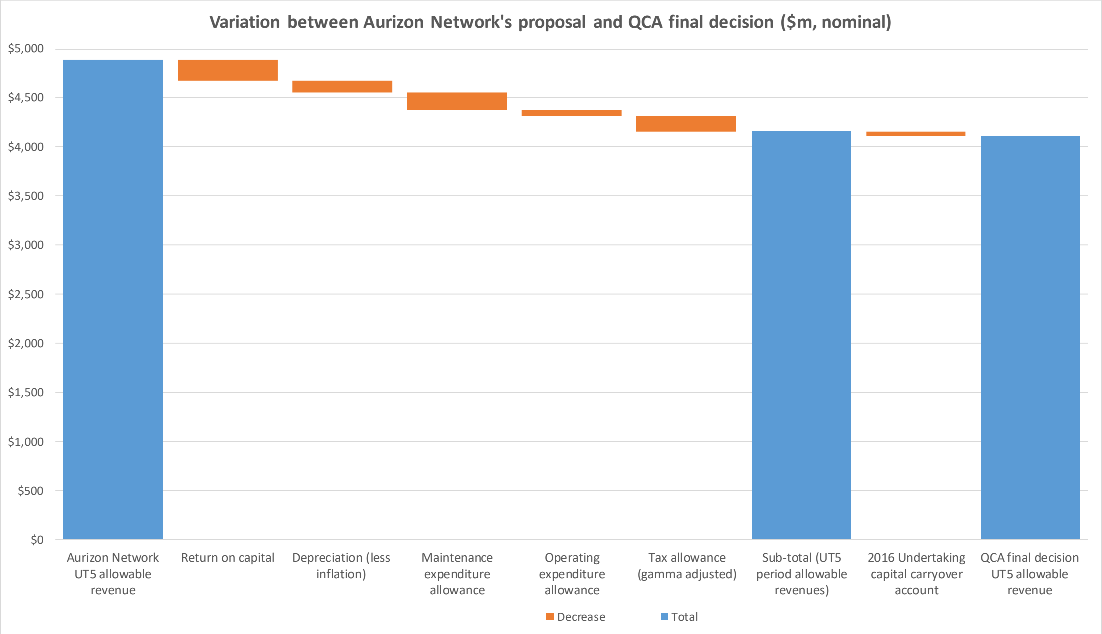
The QCA's investigation into Aurizon Network's 2017 DAU has resulted in the QCA determining that the following amendments that underpin the allowable revenue and reference tariffs are appropriate.

The key drivers of the difference between the QCA's decision and Aurizon Network's 2017 DAU proposal includes:

- The QCA's decision is for a WACC of 5.7 per cent, which is 108 basis points lower than Aurizon Network's 2017 DAU proposal of 6.78 per cent, and 133 basis points lower than Aurizon Network's 2018 March submission (Chapter 5).
- The QCA's decision to permit the recovery of revenue from investments associated with the Moura and GAPE Systems (Chapter 3), which results in higher return on capital, depreciation and tax allowances.

[12] Where in this decision, the QCA refers to costs or proposals as 'reasonable', we mean that they are either at a level that is efficient or not materially greater than the efficient level, or are otherwise appropriate to approve having regard to the factors in s. 138(2) of the QCA Act.
[13] This relates to Aurizon Network's maximum allowable revenue estimate.

- The QCA's decision to adopt a forecast inflation rate of 2.37 per cent for the purposes of indexation of the regulatory asset base, and the corresponding inflationary gain deduction from the allowable revenue (Chapter 4).
- The QCA's decision provides for an operating cost allowance of $795 million, which is $60 million less than Aurizon Network's proposal of $855 million, with an associated reduction in the capital indicator of $13 million reflecting the expensing of certain corporate overheads from 2019–20 (Chapters 3 and 7).
- The QCA's decision provides for a maintenance cost allowance of $739 million with a corresponding increase in the capital indicator of $159 million for the capitalisation of ballast undercutting renewal costs from 2019–20. This provides an approved total of $898.1 million for the UT5 pricing period, which is $23 million less than Aurizon Network's 2017 DAU maintenance proposal of $920.6 million (Chapters 3 and 8).
- The QCA's decision provides $3 million for the reconciliation of Aurizon Network's 2016 Undertaking capital carryover account, which is $51 million lower than Aurizon Network's 2017 DAU proposal (Chapter 3).
- The QCA's decision is for annual forecast volumes of 231.2 million tonnes in 2017–18 increasing to 249.2 million tonnes in 2020–21, compared to Aurizon Network's proposed 225.7 million tonnes in 2017–18 rising to 228.4 million tonnes in 2020–21[14] (Chapter 6).



As set out in the analysis that follows, these differences result from the QCA's consideration and balancing of the object of Part 5 of the QCA Act (s 138(2)(a)), the public interest (s 138(2)(d)), the legitimate business interests of Aurizon Network (s. 138(2)(b)), and the interests of access seekers (s. 138(2)(e)) and access holders (s. 138(2)(h)), where appropriate.

The QCA's decision considers in detail these matters, and this section should be read in conjunction with the entire decision including related appendices.

[14] Aurizon Network's modelling included slightly different volume forecasts.

Summary of the QCA decision on maximum allowable revenues

The QCA's decision on maximum allowable revenue is shown at Table 5, and are shown on a system basis in Table 6.

Table 5 QCA decision on allowable revenue ($'million, nominal)

Building block	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*QCA Decision total*	*Draft Decision total*
Return on capital	344	347	348	343	1,381	1,289
Depreciation (less inflation)	219	224	309	283	1,034	899
Maintenance expenditure	213	220	152	155	739	817
Operating expenditure	190	191	205	209	795	743
Tax allowance	34	35	53	49	170	141
Subtotal	999	1,017	1,066	1,039	4,120	3,888
2016 Undertaking capital carryover account[15]	1	1	1	1	3	5
Total UT5 pricing period[16]	1,000	1,017	1,066	1,040	4,123	3,893

Note: Numbers may not sum due to rounding.

Table 6 QCA decision on allowable revenue by system ($'million, nominal)

System	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*QCA Decision total*	*Draft Decision total*
Blackwater System	442	442	467	462	1,814	1,686
GAPE System	125	130	130	132	518	499
Goonyella System	366	369	388	365	1,488	1,414
Moura System	39	48	52	52	191	172
Newlands System	27	27	29	29	112	122
Total UT5 undertaking period[17]	1,000	1,017	1,066	1,040	4,123	3,893

Note: Numbers may not sum due to rounding.

The QCA's decision on electric and non-electric maximum allowable revenues is shown in the tables below.[18]

[15] This includes adjustments which relate to revenue differences derived from approved capital expenditure against the capital indicator included in the 2016 Undertaking.
[16] Excludes revenue-cap adjustments and cost pass-through applications.
[17] Includes 2016 Undertaking capital carryover account adjustments and excludes revenue-cap adjustments and cost pass-through applications.
[18] The 2016 Undertaking capital expenditure carryover account adjustment revenues are smoothed with a 2.37 per cent escalation factor (that is, using the forecast CPI, consistent with Aurizon Network's proposal) and applied over the UT5 pricing period.

Table 7 QCA decision on maximum allowable revenue—non-electric ($'000, nominal)

Building block	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*QCA Decision total*	*Draft Decision total*
Return on capital (WACC)	302,522	306,259	307,791	304,399	1,220,971	1,135,482
Return of capital (depreciation)	322,089	328,449	411,683	382,519	1,444,740	1,297,771
Less Inflationary gain	(125,785)	(127,339)	(127,976)	(126,566)	(507,667)	(496,999)
Maintenance expenditure allowance	202,675	209,233	141,156	143,948	697,012	776,402
Operating expenditure allowance	117,426	120,695	132,708	135,116	505,945	445,258
Working capital	2,457	2,512	2,596	2,518	10,083	9,474
Tax allowance	31,124	31,372	49,036	44,960	156,490	131,267
Total (unsmoothed) MAR	852,507	871,181	916,993	886,894	3,527,574	3,298,654
2016 Undertaking capital carryover account	(2,449)	(2,507)	(2,567)	(2,627)	(10,150)	(7,399)
Total (adjusted) MAR	850,058	868,674	914,426	884,266	3,517,424	3,291,255

Table 8 QCA decision on maximum allowable revenue—electric assets ($'000, nominal)

Building block	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*QCA Decision total*	*Draft Decision total*
Return on capital (WACC)	38,159	37,531	36,740	35,981	148,411	141,924
Return of capital (depreciation)	38,176	38,863	40,265	41,816	159,120	160,112
Less Inflationary gain	(15,866)	(15,605)	(15,276)	(14,960)	(61,708)	(62,120)
Maintenance expenditure allowance	10,284	10,420	10,568	10,726	41,997	40,885
Operating expenditure allowance	72,496	70,643	72,317	74,031	289,487	297,786
Working capital	430	426	434	443	1,732	1,736
Tax allowance	2,780	3,162	3,546	3,960	13,449	9,287
Total (unsmoothed) MAR	146,460	145,440	148,594	151,996	592,489	589,610
2016 Undertaking capital carryover account	3,115	3,189	3,264	3,342	12,910	12,227
Total (adjusted) MAR	149,575	148,628	151,858	155,338	605,399	601,837

A system by system breakdown is provided at Appendix C.

1.3 Opportunities for efficiency sharing and incentives

Aurizon has embarked on a broad program of organisational change, which has delivered significant savings. The QCA is encouraged by the results of these transformation initiatives and Aurizon Network’s performance against approved allowances, particularly operating costs, during the 2016 Undertaking period. This program of transformation is ongoing, and is expected to deliver further cost savings to the business.

Under the current form of regulation, Aurizon Network retains the full benefit of outperforming its regulatory approved expenditure allowances. This presents Aurizon Network with strong incentives to reduce costs, but also incentives to overstate regulatory forecasts (in particular, where base year costs are used in forecasting). Efficiency benefit sharing arrangements are one regulatory mechanism designed to present more balanced and continuous incentives, by sharing a portion of efficiency gains with customers. Such arrangements are well-established in electricity network and water regulatory frameworks, and have also been applied to rail network regulation, including in the United Kingdom.[19]

In its draft decision, the QCA noted there may be opportunities to develop incentives that encourage Aurizon Network and its customers to work together to realise efficiencies and cost savings, while preserving the service level standards expected when obtaining access to the declared service. The QCA invited proposals for suitable mechanisms to deliver these incentives.

Aurizon Network did not comment on this matter in its March 2018 submission. In contrast, the effectiveness of incentives in the current regulatory framework was a shared concern among stakeholders. Access holders and users expressed a range of concerns regarding incentives for efficient expenditure more broadly, including the form of control, capital expenditure approval processes, and incentives for efficient maintenance activities. These matters are noted in the respective sections of this decision, where relevant.

The QCA suggests that these matters are likely to be areas of increased focus for the QCA and stakeholders in future undertaking investigations. As such, the QCA strongly encourages Aurizon Network to consider—in collaboration with customers—ways in which elements of the regulatory framework could be enhanced to present Aurizon Network with more effective and balanced incentives including, but not limited to, sharing of efficiency gains. The QCA would welcome proposals of this nature from Aurizon Network ahead of subsequent regulatory pricing periods.

1.4 Modelling approach

Aurizon Network's 2017 DAU proposal

Aurizon Network's allowable revenues and references tariffs are based on financial models that use the following assumptions:

- a start-of-year commissioning date applied for capital expenditure, for the purposes of calculation of depreciation
- mid-year revenue timing
- inclusion of a working capital allowance of around $13 million.[20]

[19] Office of Rail Regulation 2013.
[20] Aurizon Network, sub. 1: 6, 104, 112.

QCA analysis and decision

Summary of decision 1.2

- **The QCA's decision is to approve Aurizon Network's 2017 DAU modelling assumptions relating to commissioning dates, revenue timing and working capital allowance.**
- **The QCA considers the appropriate way for Aurizon Network to amend its draft access undertaking to determine reference tariffs and allowable revenues for the UT5 pricing period is to apply the working capital amounts shown in Appendix C.**

The QCA's decision is to approve Aurizon Network's proposed modelling assumptions, on the basis that these parameters are consistent with regulatory practice. Stakeholders did not raise any concerns in relation to these matters.

Aurizon Network's proposal is not appropriate to approve as it overstates the amount an efficient benchmark entity would require to recover for working capital. This is not in the interests of access seekers or access holders.

The QCA accepts that working capital is required to conduct a business characterised by significant cash flow timing differences, and that Aurizon Network should be allowed to earn a return on this capital in a manner similar to investments. The QCA notes that the working capital allowance modelling approach is consistent with the approach used in Aurizon Network's 2016 Undertaking and no specific comments were received from stakeholders regarding the working capital allowance modelling assumption. The QCA's decision is for total working capital allowance of $11.8 million.

1.5 Tax allowances

Aurizon Network's 2017 DAU proposal

Aurizon Network's allowable revenues and references tariffs are based on a tax allowance of $328 million over the UT5 pricing period, determined as the estimated cost of corporate tax payable on annual revenue less annual tax expense less the value of imputation credits (gamma).[21]

Aurizon Network’s annual tax expense includes:

- allowances for operating and maintenance costs[22]
- interest tax expense, calculated using the benchmark gearing ratio and cost of debt[23]
- tax depreciation relating to the regulatory asset base.

[21] See Chapter 5 and Appendix F for the QCA’s decision on gamma.
[22] See Chapters 7 and 8 for the QCA’s decision on operating and maintenance costs.
[23] See Chapter 5 and Appendix F for the QCA’s decision on the benchmark gearing ratio and cost of debt.

QCA analysis and decision

Summary of decision 1.3

- **The QCA considers that the appropriate way for Aurizon Network to amend its draft access undertaking is to revise its proposed allowable revenues and reference tariffs based on the tax allowances outlined in Appendix C.**
- **The QCA's decision on these matters should be read in conjunction with Chapter 5.**

The QCA has estimated forecast revenue and tax expenses for each year of the UT5 pricing period to derive tax allowances to be recovered through allowable revenues and reference tariffs. This is based on the QCA's allowances for operating and maintenance costs and interest tax expense (calculated using the benchmark gearing ratio and cost of debt), as well as providing recognition to the value of imputation credits.

The QCA’s decision provides for a tax allowance of $170 million over the UT5 pricing period based on the detailed break-down provided in Appendix C.

In its March 2018 submission, Aurizon Network said that due to the timing of Aurizon Network’s original submission, tax depreciation forecasts have changed and submitted a revised tax depreciation base.[24, 25]

The QCA's assessment has identified a number of transpositional errors in the modelling underpinning Aurizon Network's March 2018 submission and variations in the allocation of forecast tax depreciation between different pricing groups. The QCA has addressed these modelling assumptions in order to determine the appropriate tax allowances to be recovered within allowable revenues and reference tariffs.

The QCA considers that using the approved allowances for operating and maintenance costs and interest tax expense, calculated using the benchmark gearing ratio and cost of debt, as well as forecast tax depreciation, appropriately balances the interests of Aurizon Network and access holders by minimising over- or under-compensation to Aurizon Network, thereby encouraging efficient use and investment in the network.

[24] Aurizon Network, sub. 40: 24.
[25] Aurizon Network, sub. 40: 54.

2 RISK AND THE REGULATORY FRAMEWORK

2.1 Aurizon Network's 2017 DAU proposal

Aurizon Network submitted that the inherent risks associated with managing Aurizon Network assets are higher than what the QCA has considered previously.[26] In particular, Aurizon Network considered that it did not have the same risk profile as a regulated utility and the QCA should take into account, amongst other things, Aurizon Network's:

(a) volatile operating environment, including increased counterparty risk and long-term structural issues for thermal coal

(b) relatively small customer base, with all customers being exposed to a single asset class (coal), and network characteristics that result in an increased risk of asset stranding

(c) exposure to revenue/capital deferrals where volume ramp-up is not aligned with customer expectations.

Aurizon Network considered that if it is provided with a lower regulated return than proposed in its 2017 DAU submission, its regulatory arrangements must be adjusted such that the commercial and regulatory risks flowing from these arrangements are reduced accordingly.[27]

QCA analysis and decision

Summary of decision 2.1

- **The QCA has given consideration to Aurizon Network's exposure to risk, including how risk is addressed within the regulatory framework and its 2017 DAU. This includes an assessment of the various risk mitigation, allocation and compensation arrangements proposed within Aurizon Network's 2017 DAU.**
- **The QCA's decision provides Aurizon Network with a return on investment commensurate with the regulatory and commercial risks related to the provision of access to the declared service.**

Aurizon Network's exposure to risk is an important consideration in determining an appropriate access undertaking for the declared service. Aurizon Network will inevitably be exposed to risk in its role of providing access to the declared service.

In considering all aspects of Aurizon Network's 2017 DAU and having regard to all relevant submissions and evidence submitted to the QCA, both before and after the draft decision, the QCA has given consideration to Aurizon Network's exposure to risk, including the appropriate mitigation, allocation and compensation arrangements within the regulatory framework—as proposed by Aurizon Network in its 2017 DAU. The QCA considers its decision provides Aurizon Network with a return on investment commensurate with the regulatory and commercial risks associated with providing access to the declared service.[28]

The identification of a risk *per se* is not sufficient grounds to receive compensation. An access provider should not be compensated to the extent risk is mitigated or allocated to another

[26] Aurizon Network, sub. 1: 2.
[27] Aurizon Network, sub. 1: 2.
[28] The pricing principles in s. 168A of the QCA Act are only one of the factors that the QCA have regard to, and weigh up, in deciding whether it is appropriate to approve a draft access undertaking.

party. Moreover, an access provider should not be compensated for its own inefficiency or negligence.

The pricing principles in s. 168A of the QCA Act are only one of the factors that the QCA have regard to, and weigh up, in deciding whether it is appropriate to approve a draft access undertaking.

In examining Aurizon Network's risks associated with the provision of the declared service, the QCA considers:

(a) Aurizon Network’s exposure to short-term coal market volatility and counterparty risk is largely addressed by its regulatory arrangements. In particular, the regulatory framework allocates short-term demand risk to access holders.

(b) Based on the evidence provided, there is no apparent structural decline in demand for coal from the mines serviced by the CQCN. The measures proposed by Aurizon Network in its 2017 DAU, combined with the medium- to long-term market outlook for coal, the desirability of the attributes of the coal itself, and the highly competitive position of Queensland coal producers in the global market, means that Aurizon Network’s asset stranding risk has been assessed as minimal.

(c) This decision does not provide investors with uncertainty as to when deferred capital will be recovered. The QCA’s decision is to approve Aurizon Network’s 2017 DAU proposal to not defer WIRP capital relating to the Blackwater System and Aurizon Network’s March 2018 submission to not defer the recovery of investments in the Moura and GAPE Systems. The QCA’s decision on deferrals is outlined in Chapter 3.

This decision has examined all elements of Aurizon Network’s 2017 DAU proposal and had regard to the regulatory and commercial risks faced by Aurizon Network. In particular, the QCA’s consideration of the appropriate regulatory rate of return for the UT5 regulatory pricing period is outlined in Chapter 5.

Aurizon Network and the QRC supported the QCA’s approach in considering the overall risk profile in determining whether the requirements of s. 168A of the QCA Act have been satisfied.[29] The QRC considered that Aurizon Network should only be compensated through the rate of return for the regulatory and commercial risks involved in providing access to the CQCN.[30]

In considering Aurizon Network's exposure to risk, amongst other things, the QCA has examined:

- factors affecting Aurizon Network’s exposure to risk—including the way in which risk is addressed within Aurizon Network’s 2017 DAU and the amended 2017 DAU, as well as the characteristics of the CQCN coal market (section 2.2)
- stakeholder submissions relating to Aurizon Network’s exposure to risk (Appendix G).

The QCA suggests that proposals from Aurizon Network to increase its exposure to risk, or performance incentives, are important considerations for all stakeholders.

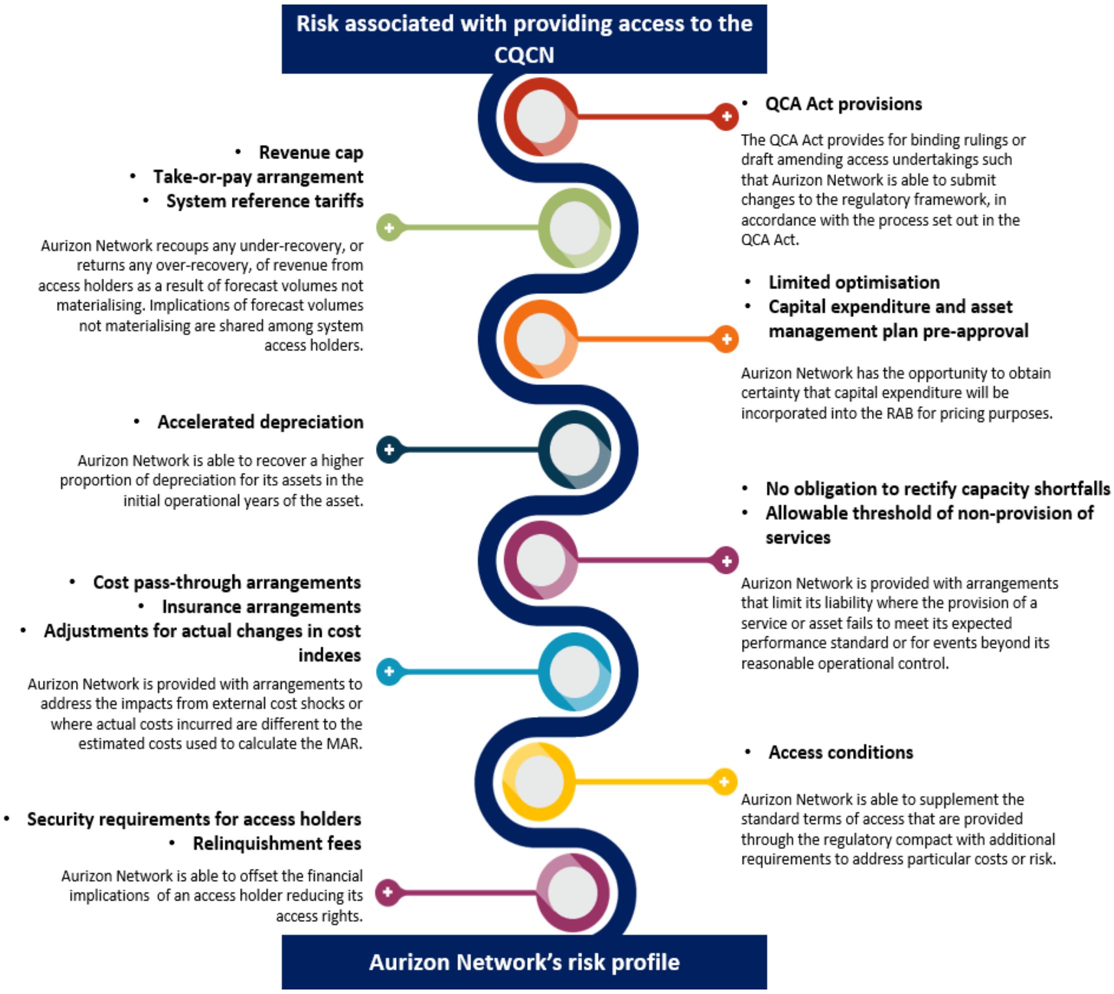
[29] Aurizon Network, sub. 40: 31; QRC, sub. 53: 4.
[30] QRC, sub. 53: 10.

2.2 Overview of factors affecting Aurizon Network's exposure to risk

Aurizon Network operates within a stable and well-established regulatory framework. Risk is accounted for within QCA decisions through the consideration of Aurizon Network's reference tariffs and allowable revenues; contractual terms specified in standard agreements; provisions within Aurizon Network's access undertaking; and other mechanisms within the QCA Act.

The regulatory framework contains various risk allocation, mitigation and compensation mechanisms (Figure 3).

Figure 3 Risk and the regulatory framework—Aurizon Network



Note: This summary is not intended to be an exhaustive list of how risk is addressed in the regulatory framework.

Additionally, Aurizon Network's exposure to risk is affected by the characteristics of the markets in which Aurizon Network operates/services.

For the reasons set out in Chapter 5, the QCA's decision on the regulatory rate of return is at least commensurate with Aurizon Network's exposure to its commercial and regulatory risks, particularly given the way in which risk is addressed in the regulatory framework. As such, the QCA does not consider adjustments to Aurizon Network's regulatory framework are required to reduce Aurizon Network's exposure to commercial and regulatory risks.

In light of the above, the following sections outline the extent to which Aurizon Network's regulatory framework, as well as the characteristics of the market in which it operates, affect Aurizon Network's exposure to:

- volatile market conditions and counterparty risk (section 2.2.1)

- a long-term structural decline in demand for coal from the CQCN (section 2.2.2)
- revenue/capital deferrals (section 2.2.3).

2.2.1 Aurizon Network's exposure to volatile market conditions and counterparty risk

Stable and predictable returns

The regulatory framework provides Aurizon Network with stable regulatory returns during the regulatory period. As recognised by Aurizon Network:

> Aurizon Network's regulated revenue is protected through a combination of contractual and regulatory mechanisms that are included in the Access Undertaking and access agreements.[31]

This is largely due to the way in which the regulatory framework mitigates and allocates risk. For instance, where an allowable revenue shortfall occurs, Aurizon Network has:

- take-or-pay mechanisms—enabling Aurizon Network to recover a revenue shortfall directly from an access holder
- revenue cap mechanisms—if the take-or-pay mechanisms do not sufficiently recover a revenue shortfall, the revenue cap mechanism allows the revenue shortfall to be recovered two years later through system reference tariffs
- system reference tariffs—if an access holder counterparty fails, system reference tariffs recover the system allowable revenue from the remaining users within that system, thereby socialising counterparty risk among the users in that system.

In combination, these features enable Aurizon Network to earn its allowable revenues from access holders, irrespective of the cyclical price/market conditions that affect the seaborne coal market.

Diversified and resilient customer base

Aurizon Network's regulatory framework, combined with its market position as the sole below-rail service provider, means that it is not exposed to risk in the same manner as other industry participants. The risks facing individual coal producers are not indicative of the extent to which Aurizon Network is exposed to the cyclical nature of the industry, whether through volume risk or counterparty risk.

Mines in the CQCN are operated by a diversified group of coal producers. Resource Management International (RMI)[32] reported that while some mines were placed into care and maintenance, the net impact of this loss of production was more than offset by productivity improvements at other operating mines.[33]

RMI stated that the CQCN has shown resilience in the face of difficult and volatile seaborne coal prices over the last five years.[34]

> The Queensland coal industry has performed very well in terms of annual coal exports over the last 5 years despite severe volatility in both coking and thermal coal prices.[35]

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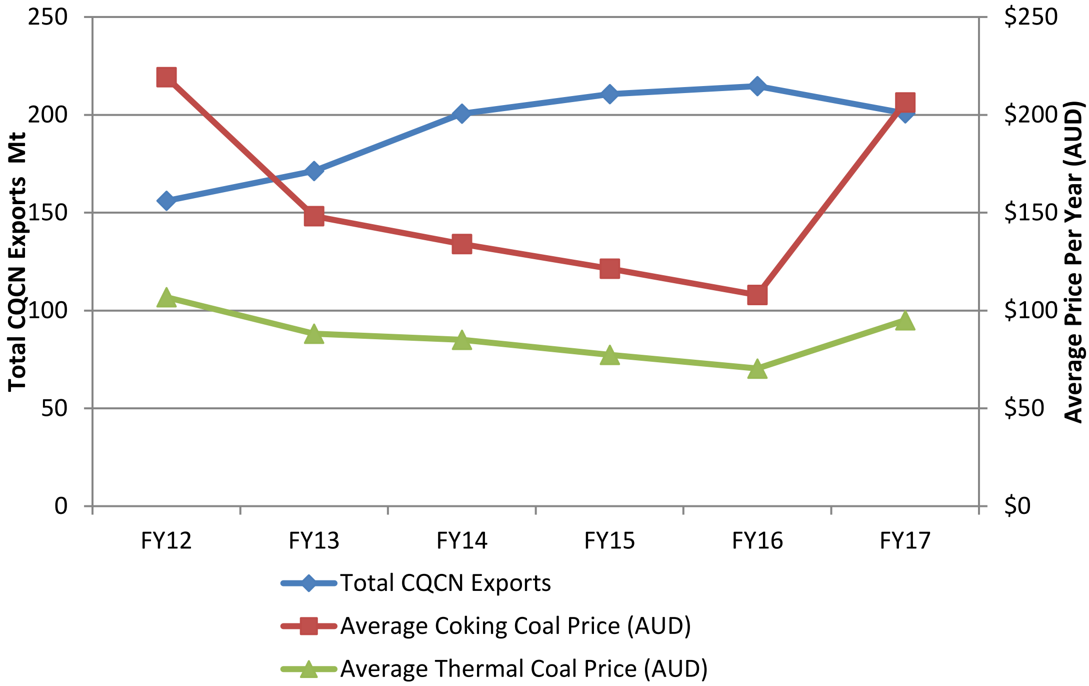
[31] Aurizon Network 2017h: 16.
[32] The QCA engaged Resource Management International (RMI) to advise the QCA on the reasonableness of Aurizon Network's coal volume forecasts for the UT5 regulatory pricing period. This report is available on the QCA's website (see Resource Management International 2017).
[33] Resource Management International 2017: 11.
[34] Resource Management International 2017: 4.
[35] Resource Management International 2017: 10.

The QCA notes that despite lower coal prices in recent years, the CQCN has continued to demonstrate consistent annual growth in coal exports, except for the flood events in 2016–17 (Figure 4).

Figure 4 CQCN coal exports vs coal prices



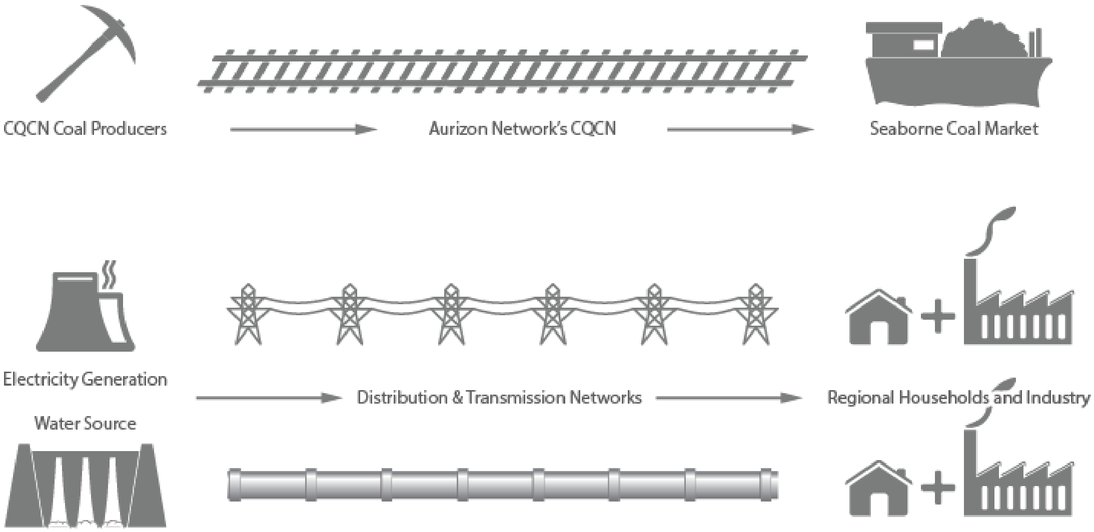
Source: Resource Management International 2017, Queensland Government statistics, QCA analysis.

Counterparty risk mitigated by product demand

As for network providers in other industries, counterparty risk for Aurizon Network must be considered in relation to the underlying drivers for demand in the relevant market—in this instance, the seaborne coal market (Figure 5).

Fundamentally, the competitiveness of coal producers in the CQCN will determine Aurizon Network's exposure to risk in the longer term. While the ownership structure of coal producers may change as a result of firm-specific factors, below-rail coal services will be sustained as long as the output of mines remains demanded by end customers.

Figure 5 Underlying drivers for demand for Aurizon Network and other network industries



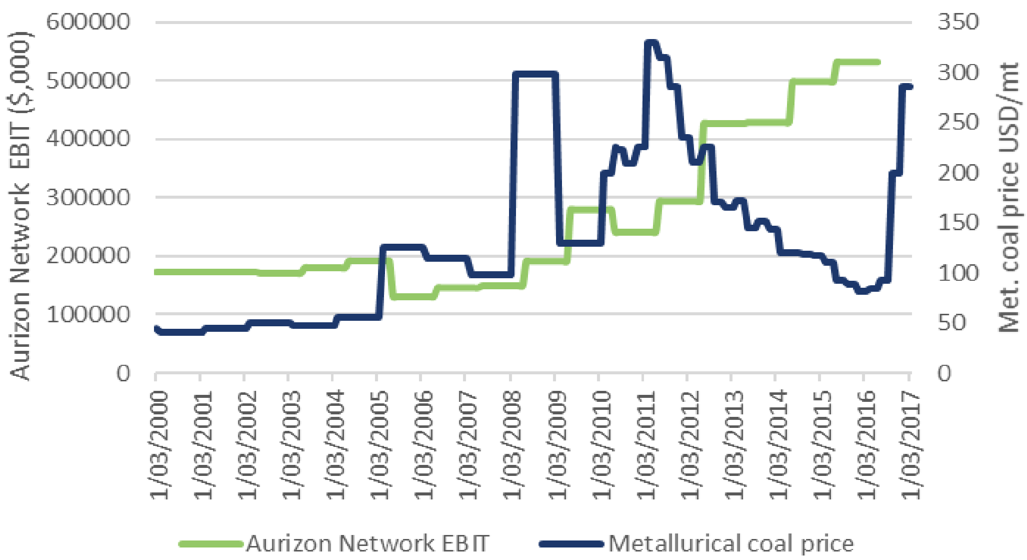
As discussed below, the attributes of the CQCN, along with the long-term outlook for seaborne coal markets, support the ongoing long-term demand for CQCN coal exports.

Relevantly, RMI and Aurizon Network forecast that seaborne coal demand is likely to grow steadily for the UT5 regulatory period (Chapter 6).

Limited exposure to coal price/market cycles and cost pass-through events

Aurizon Network's EBIT has not been adversely affected by export coal price fluctuations. Figure 6 shows how Aurizon Network's earnings have been insulated from significant fluctuations in metallurgical coal prices.

Figure 6 Aurizon Network's EBIT and the metallurgical coal price, 2000–17



Source: Incenta Economics Report 2017.

Aurizon Network's regulatory framework mitigates Aurizon Network's exposure to coal price volatility.

Furthermore, cost pass-through arrangements within the proposed regulatory framework allocate the risk of cost variations to access holders. Aurizon Network may submit a variation to a reference tariff to recover those costs that are beyond Aurizon Network's control and are associated with an endorsed variation event (for example, costs associated with a change in law or relevant taxes, the pricing of electricity and the QCA levy) and a review event (costs associated with force majeure events). Indeed, Aurizon Network has submitted adjustments to the reference tariffs to recover the incremental costs associated with previous flood recovery efforts (Table 9).

Table 9 Aurizon Network expenditure claims resulting from tropical cyclones ($m)

Cyclone event	*Year*	*Opex claim*	*Capex claim*	*Status of claim*
Oswald	2013	16.1	2.1	Expenditure approved 2014.
Marcia	2015	4.0	4.4	Opex approved 2016; capital expenditure under review.
Debbie	2017	16.9	TBA	Opex submitted to QCA for approval.

Source: Aurizon Network 2017g: 36.

2.2.2 Aurizon Network's exposure to a long-term structural decline in demand for coal from the CQCN

System reference tariffs provide for efficient investment

Aurizon Network argued that the system-based regulated asset base (RAB) results in an increased risk of asset stranding.

System reference tariffs and allowable revenues, as proposed in Aurizon Network's 2017 DAU, are determined based on individual coal systems, where such systems are readily apparent due to the mostly separable nature of the assets, operating mode and costs as well as the origin–destination combinations of traffic.

The various systems themselves reflect historical investment decisions and price/service quality trade-offs. For example, each system has different maximum below-rail transit time thresholds that highlights the service quality trade-offs that have underpinned past investment decisions. Overall, the supply chains are not homogenous.

A system reference tariff approach provides appropriate pricing signals to guide decision-making on the use of existing resources as well as investment in new capacity or operational improvements. This should minimise the risk of inefficient investments and operational practices, as they need to be cost-reflective and responsive to the needs of the operators/users in that system.

However, in relation to Aurizon Network's exposure to demand deterioration, Aurizon Network submitted that:

- It is not reasonable or appropriate to extend the risk profile associated with access in the Goonyella System (where the demand is primarily metallurgical coal) to the remainder of the CQCN. A significant value of the RAB is exposed to thermal coal demand, which holds different demand and supply dynamics compared to metallurgical coal.[36]
- With the exception of the Goonyella System, the remaining systems are highly dependent on the output from a small number of mines. This concentration ratio increases the exposure to

[36] Aurizon Network, sub. 40: 31, 38–40.

optimisation risks associated with the loss of one or more major producing mines in a single coal system.[37]

- There is no mechanism in the regulatory framework that allows revenue shortfalls or stranding events in a RAB component to be recovered from another component.

The QCA acknowledges that the market characteristics and concentration ratios may vary from system to system. While it is the QCA's view that the system reference tariff approach provides appropriate pricing signals to guide decision-making, if such a demand deterioration risk does materialise for a specific asset in future, the QCA considers that Aurizon Network has the ability to manage this risk within the regulatory framework. In particular, Aurizon Network is able to submit changes to the regulatory compact.[38] Moreover, as outlined in chapter 16, the QCA considers optimising assets due to demand deterioration should occur after steps are made by Aurizon Network to negotiate with its customers on solutions for addressing the CQCN's long-term viability.

In addressing such issues, the QCA notes that Aurizon Network has submitted proposals to mitigate and allocate certain demand risks for its electric infrastructure assets.

Based on the information provided, the QCA is not of the view that a material demand deterioration risk currently exists for a specific asset in the CQCN due to the market characteristics of thermal coal or the closure of a producing mine at this time. Indeed, current market activity suggests the contrary. As noted by Aurizon Network, volume forecasts should be increased and some mining assets in Central Queensland resuming production from previously being put into care and maintenance.[39]

Long-term demand for the output of the CQCN

The continued competitiveness of producers to supply the market will be a key determinant of sustained demand for coal haulage services in the CQCN. In this respect, the QCA notes that the long-term outlook for seaborne coal markets supports the ongoing long-term demand for CQCN coal exports. RMI considers that long-term seaborne demand for coal in the ASEAN region including India, South East Asia and the Middle East, will be strong and positive for coal producers in Australia. This long-term market outlook was outlined by Aurizon Network in its 2017 DAU:

> Aurizon Network expects there will be an on-going long term demand for the output of the Central Queensland coal market due to the quality of coal reserves, cost competiveness, proximity to end markets and access to reliable world class infrastructure.[40]

The characteristics of the CQCN coal market also support this positive market outlook. Queensland-based exporters are generally at the low-cost to mid-cost end of the seaborne coal export cost curve (Figure 7). As noted by Aurizon Network, Queensland's metallurgical coal production remains highly competitive, positioned amongst producers with the highest cash margins.[41]

In addition to coal producers' competitiveness on a cost basis, the CQCN produces some of the highest quality metallurgical and thermal coal, which is highly sought after in the seaborne coal

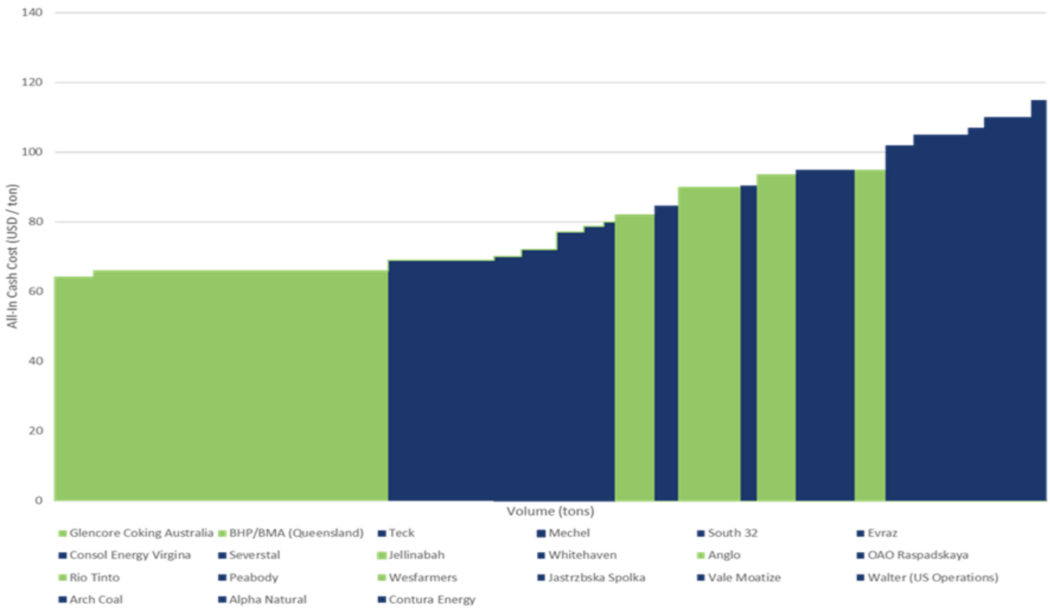
[37] Aurizon Network, sub. 40: 42.
[38] This includes a DAAU submission, such as that progressed by Aurizon Network in relation to AT_5, or as part of a replacement access undertaking process for a subsequent regulatory period.
[39] Aurizon Network, sub. 40: 6, 148.
[40] Aurizon Network, sub. 1: 20.
[41] Aurizon Network 2017h: 28.

markets. As outlined by RMI, Australian coking coals have premium coking strength properties compared to most high ash Chinese and Indian coking coals and the Australian thermal coals are increasingly sought after by companies constructing HELE power stations in India, Vietnam, Thailand, Malaysia, Egypt and Pakistan.[42]

Aurizon Network agreed with RMI concerning the relative quality of coal supply in central Queensland and the long-term opportunity for export growth, in particular the resilience of Australian seaborne export volume (compared to competing export nations) in periods of subdued coal prices.[43] Aurizon Network also acknowledged:

> Premium products and achieved cost reductions place Queensland mines in the top two quartiles of the global seaborne metallurgical coal margin curve.[44]
>
> Where coal-fired generation continues to expand, it is important that the highest quality coal is used to reduce emissions. The coal Aurizon hauls has higher energy and lower ash content than most other sources of seaborne thermal coal.[45]

Figure 7 Seaborne metallurgical coal exports, all-in cost curve



Source: Incenta Economics report 2017.

Furthermore, the large reserves in the CQCN support a long-term production life for coal producers to supply the seaborne coal markets in the foreseeable future. RMI reported that all central Queensland mines have more than adequate JORC defined reserves and resources to support the forecast demand to well beyond 2020–21. The long-term production life in the CQCN was also recognised by Aurizon Network:

> Large reserves support production life in excess of 15 years on average for existing operations, with resources supporting an additional ~30 years of production.[46]

[42] Resource Management International 2017: 12.
[43] Aurizon Network, sub. 40: 142.
[44] Aurizon Network 2017h: 15.
[45] Aurizon Holdings 2017e.
[46] Aurizon Network 2017h: 13.

In relation to long-term demand for thermal coal, Aurizon Network considered that transition risks, related to energy policy, regulation, technology and market shifts that are necessary to achieve the transition to a low-carbon economy, will affect demand.[47] Additionally, Aurizon Network submitted that recent policy decisions by Australian banks have impacted lending to thermal coal projects.[48]

While acknowledging the potential constraints on long-term demand for thermal coal, the QCA notes the view held by Aurizon Network that in a carbon-constrained environment higher quality coal (which Australia supplies) will be favoured and will increase.[49]

> Although we, of course, recognize that renewable energy will increase in the energy mix over the long term, thermal coal capacity will remain and is expected to grow in absolute terms in key export nations like Australia.
>
> For both coal types [thermal and metallurgical], the quality of Australian coal and the cost competitiveness, including access to reliable rail infrastructure, provides confidence that Australia will continue to be a significant contributor to seaborne supply.[50]

As such, the QCA does not consider it appropriate to require any special regulatory treatment based on the market characteristics in related seaborne coal markets.

Mitigating Aurizon Network's exposure to demand deterioration

In addition to the market outlook and characteristics that support the competitiveness of coal producers in the CQCN, the regulatory framework provides Aurizon Network with mechanisms that mitigate its exposure to the risk of demand deterioration. These include:

- accelerated depreciation—Aurizon Network is able to recover a greater proportion of the depreciation of its assets during the initial years of the asset life for investments made after 2009, as well as truncated asset lives implemented in the 2006 Undertaking
- access conditions—Aurizon Network has the ability to seek access conditions for expansion projects. For example, it could assume asset stranding risks in return for above-regulated returns
- limited asset optimisation—which mitigates the risk that capital expenditure previously undertaken by Aurizon Network is not included in the RAB used for pricing purposes
- security requirements for access holders and relinquishment fees—these offset the financial impact of an access holder reducing its access rights.

The QCA considers that because of the measures proposed by Aurizon Network in the 2017 DAU, combined with the medium- to long-term market outlook for coal, and the highly competitive position of Queensland coal producers, Aurizon Network's asset stranding risk is minimal.

2.2.3 Aurizon Network's exposure to revenue/capital deferrals

The QCA's decision is that Aurizon Network is entitled to recover its WIRP and GAPE investments, as this is commensurate with the regulatory and commercial risks that Aurizon Network has assumed. In relation to WIRP investments, Aurizon Network has assumed the

[47] Aurizon Network, sub. 40: 41— The International Energy Agency forecasts a reduction in thermal coal traded volumes from 756 million tonne coal equivalent (mtce) in 2017 to 721 mtce in 2040.
[48] Aurizon Network, sub. 40: 41.
[49] Aurizon Network 2017g: 27.
[50] Aurizon Holdings 2018c: 4.

additional risks accepted as part of the access conditions for its WIRP investment. In forming this view, the QCA considers that Aurizon Network has been compensated, in terms of the WIRP fee arrangements, for assuming the asset stranding risks associated with its WIRP investment, as proposed in the access conditions report for the WIRP investment.[51]

[51] QR Network 2011. For instance, other risks assumed by Aurizon Network include site remediation costs. These additional risks are outlined in the relevant Access Conditions Report.

3 THE REGULATORY ASSET BASE AND DEPRECIATION

3.1 Aurizon Network's 2017 DAU proposal

The reference tariffs and allowable revenues for the UT5 pricing period proposed in Aurizon Network's 2017 DAU are based on:

- an opening asset value of $5,952 million, applying the roll-forward methodology consistent with its 2016 Undertaking and then applying capital/revenue deferrals for WIRP Moura and NAPE
- the RAB being rolled forward during the UT5 pricing period for forecast indexation, depreciation, and a proposed capital indicator of $778.3 million
- depreciation rates based on previous QCA decisions.[52]

Key issues identified during the QCA's investigation

The QCA has considered all elements of Aurizon Network’s 2017 DAU in making this decision on the value of the regulatory asset base (RAB) over the UT5 pricing period, which is used to determine reference tariffs and allowable revenues. The following issues attracted comment from stakeholders or were identified for further consideration:

- opening value of the RAB (section 3.2), and in particular:
  - excluding investments associated with WIRP and NAPE – referred to as capital/revenue deferrals (section 3.2.2)
  - rolling forward the RAB consistent with the roll-forward principles in Aurizon Network's 2016 Undertaking (section 3.2.3)
  - including an estimated $12.1 million for equity-raising costs for approved capital expenditure (section 3.2.5)
- forecast RAB values during the UT5 pricing period to develop reference tariffs and allowable revenues, including:
  - a capital indicator of forecast capital expenditure to be included in reference tariffs and allowable revenues during the UT5 pricing period (section 3.3)
  - forecast indexation (see Chapter 4)
  - depreciation arrangements (section 3.4).

[52] Aurizon Network, sub. 1: 131, 139.

QCA analysis and decision

Summary of decision 3.1

- **The QCA considers the appropriate way for Aurizon Network to amend its 2017 DAU is to determine reference tariffs and allowable revenues for the UT5 pricing period by applying:**
  - **(a) an opening asset value of $5,926 million, based on:**
    - **(i) accepting Aurizon Network's 2017 DAU proposal to cease capital/revenue deferrals for WIRP;**
    - **(ii) accepting Aurizon Network's March 2018 submission to cease capital/revenue deferrals for NAPE and WIRP Moura;**
    - **(iii) QCA-approved capital expenditure; and**
    - **(iv) rolling forward the RAB consistent with Aurizon Network's 2016 Undertaking principles.**
  - **(b) RAB values over the UT5 pricing period based on:**
    - **(i) a capital indicator of $920.4 million (in mid-year values) over the UT5 pricing period, which includes transitional arrangements for the capitalisation of ballast undercutting renewal costs and certain overhead costs (due to the recent corporate restructure);**
    - **(ii) forecast average inflation of 2.37 per cent (see Chapter 4); and**
    - **(iii) depreciation charges based on the methodology used in previous QCA decisions.**
- **The QCA requires Aurizon Network's 2017 DAU to be amended to reflect the RAB values over the UT5 pricing period and depreciation charges outlined in Table 10 and Appendix D.**

Having regard to the factors set out in s. 138(2) of the QCA Act, the QCA considers it appropriate to approve an opening asset value of $5,926 million, including capital investments associated with WIRP and NAPE for determining reference tariffs and system allowable revenues for the UT5 pricing period. The QCA's decision appropriately balances Aurizon Network's legitimate business interests and the interests of access holders and access seekers. This decision advances the object of Part 5 of the QCA Act and the pricing principles at s. 168A(a) and (d) of the QCA Act, by generating expected revenue at least enough to meet the efficient costs of providing access to the service and providing incentives for Aurizon Network to reduce costs or otherwise improve productivity.

The QCA's decision is that the reference tariffs and allowable revenues in Aurizon Network's 2017 DAU be amended to reflect the RAB values as summarised in Table 10 (and by system in Appendix D).

Table 10 QCA decision on the RAB, 2017–18 to 2020–21 ($ million, nominal)

	2017–18	*2018–19*	*2019–20*	*2020–21*
1. Non-electric assets				
Opening asset value	5,243.6	5,345.5	5,316.9	5,259.6
Plus capital indicator	212.9	178.2	234.4	230.5
Plus indexation	129.3	130.9	131.6	130.1

	2017–18	*2018–19*	*2019–20*	*2020–21*
Less depreciation	331.1	337.7	423.2	393.3
Closing asset value	5,254.7	5,316.9	5,259.6	5,227.0
2. Electric assets				
Opening asset value	682.5	665.3	653.0	637.0
Plus capital indicator	5.7	11.6	9.7	12.0
Plus indexation	16.3	16.0	15.7	15.4
Less depreciation	39.2	40.0	41.4	43.0
Closing asset value	665.3	653.0	637.0	621.4
Total opening asset values	5,926.1	6,010.8	5,969.9	5,896.6

Note: Non-electric includes investments recovered in the GAPE System reference tariff, where appropriate.

3.2 Opening asset value (as at 1 July 2017)

Aurizon Network's 2017 DAU proposal

Aurizon Network submitted an opening value, for the RAB, of $5,952 million (exclusive of equity-raising costs of $12 million) to determine reference tariffs and allowable revenues for the UT5 pricing period. With the inclusion of deferred capital from WIRP Moura and NAPE, Aurizon Network said the opening value of the RAB would be $6,255 million (excluding equity raising costs).[53]

Aurizon Network's proposal was based on:

- excluding investments associated with WIRP Moura and NAPE (capital/revenue deferrals)
- rolling forward the RAB from the previous regulatory period, incorporating:
  - approved capital expenditure claims up to 2014–15 and forecasts for 2015–16 and 2016–17[54]
  - depreciation charges, including accelerated depreciation, based on QCA-endorsed rates
  - actual inflation for 2013–14, 2014–15 and 2015–16, and a forecast of 2.5 per cent for 2016–17[55]
- including equity-raising costs for actual capital expenditure incurred during the previous regulatory period.[56]

[53] Aurizon Network, sub. 1: 131. Since lodging its 2017 DAU, Aurizon Network submitted that the opening RAB value should take account of actual outcomes for approved capital expenditure and indexation.
[54] Noting that the 2015–16 and 2016–17 capital expenditure claims were subject to QCA approval at the time Aurizon Network submitted its 2017 DAU in November 2016.
[55] Since Aurizon Network's submission, the actual inflation rate for 2016–17 has been 1.9 per cent.
[56] Aurizon Network, sub. 1: 126–127, 132, 135.

Table 11 Aurizon Network's proposed opening RAB ($ million, nominal)[57]

Traction	***2013–14***	***2014–15***	***2015–16***	***2016–17***	***2017–18***
1. Non-electric assets					
Opening asset value	4,123.0	4,307.7	4,593.1[b]	5,000.1[c]	5,264.1[d]
Plus capital indicator	282.5	146.8	491.5	241.2	
Plus indexation	141.8	67.4	75.7	131.0	
Less depreciation	(239.6)	(250.8)	(294.7)	(322.9)	
Closing asset value	4,307.7	4,271.2	4,865.5	5,049.5	
2. Electric assets					
Opening asset value	523.4	510.1[a]	495.6[b]	687.4	687.7[d]
Plus capital indicator	20.4	4.5	244.3	13.0	
Plus indexation	17.5	7.8	11.0	17.5	
Less depreciation	(50.5)	(51.2)	(63.6)	(51.2)	
Closing asset value	510.8	471.2	687.4	666.8	
3. **Equity-raising costs**					
Plus capitalised equity raising costs					12.2
Total opening asset values	**4,646.4**	**4,817.9**	**5,088.7**	**5,687.5**	**5,964.0**

Notes: Capital expenditure has been converted to 'start of year' values. Variance between opening and closing RAB is due to: (a) electric assets disposals (b) inclusion of WIRP capital expenditure except for deferrals (c) inclusion of Byerwen GAPE (d) inclusion of WIRP in the Blackwater System that was deferred in UT4.

Aurizon Network subsequently submitted an updated opening asset value taking into account the most recently available information. The QCA's decision takes account of this information.

[57] Aurizon Network, sub. 1: 132.

QCA analysis and decision

Summary of decision 3.2

- **The QCA considers the appropriate way for Aurizon Network to amend its 2017 DAU is to apply an opening asset value of $5,926 million, to determine reference tariffs and allowable revenues for the UT5 pricing period, based on:**
  - **(a) accepting Aurizon Network's inclusion of capital relating to WIRP and NAPE investments;**
  - **(b) using QCA-approved capital expenditure for 2013–14, 2014–15, 2015–16 and 2016–17;**
  - **(c) rolling forward the RAB, adjusting for actual depreciation and inflation;**
  - **(d) including revised equity raising costs in the RAB based on approved capital expenditure for 2013–14, 2014–15, 2015–16 and 2016–17; and**
  - **(e) reconciling the 2016 Undertaking capital carryover account to be recovered during the UT5 pricing period.**

The QCA's decision is to approve Aurizon Network's approach for determining the opening asset value of the RAB, although the QCA requires Aurizon Network to amend its 2017 DAU to include investments associated with the NAPE and WIRP Moura projects, as well as updates for actual data and more recent forecasts.

The QCA's decision is that the opening value of Aurizon Network's RAB should be amended to $5,926 million, based on:

- including Aurizon Network's investments that were previously deferred for WIRP Blackwater, WIRP Moura and NAPE (section 3.2.2)
- rolling forward the RAB to derive an opening asset value for the UT5 pricing period (section 3.2.3)
- incorporating equity raising costs into the RAB (section 3.2.5)
- reconciling the 2016 Undertaking capital carryover account (section 3.2.6).

The QCA considers it appropriate to make this decision having regard to the factors set out in s. 138(2) of the QCA Act and for the reasons contained in our analysis below.

The QCA's decision relating to the opening asset value is summarised in Table 12 below. A breakdown of these values by system is provided at Appendix D.

Table 12 QCA decision on Aurizon Network's opening RAB ($ million, nominal)

Traction	*2013–14*	*2014–15*	*2015–16*	*2016–17*	*2017–18*
1. Non-electric assets					
Opening asset value	4,170.5	4,358.9	4,647.9[b]	5,048.3[c]	5,228.5[d]
Plus capital indicator	282.7	146.8	480.4	221.1	
Plus indexation	145.3	71.0	79.5	99.8	
Less depreciation	(239.6)	(250.8)	(294.2)	(319.2)	
Closing asset value	4,358.9	4,326.0	4,913.7	5,050.0	

Traction	*2013–14*	*2014–15*	*2015–16*	*2016–17*	*2017–18*
2. *Electric assets*					
Opening asset value	523.4	510.1[a]	495.6[b]	694.4	686.4[d]
Plus capital indicator	20.4	4.5	251.6	10.4	
Plus indexation	17.5	7.8	11.1	12.9	
Less depreciation	(50.5)	(51.2)	(64.0)	(51.1)	
Closing asset value	510.8	471.2	694.4	666.6	
3. Equity raising costs					
Plus capitalised equity raising costs					11.2
Total opening asset values	4,693.9	4,869.0	5,143.6	5,742.7	5,926.1

Notes: Variance between opening and closing RAB is due to: (a) electric assets disposals (b) inclusion of WIRP capital expenditure except for deferrals (c) inclusion of Byerwen GAPE (d) inclusion of WIRP in the Blackwater System that was deferred in UT4.

3.2.2 Aurizon Network's cessation of capital/revenue deferrals (WIRP and NAPE)

The QCA considers it appropriate to approve Aurizon Network's 2017 DAU proposal subject to the inclusion of its March 2018 submission to include capital investments associated with WIRP Moura and NAPE projects to determine the opening asset value for the UT5 pricing period.

After considering these matters afresh, the QCA considers that capital/revenue deferrals are a prudent mechanism to address:

- short-term issues such as initial uncertainty with forecast volumes due to ramp-up issues; and/or
- circumstances where Aurizon Network is unable to recover costs from relevant customer(s).

However, the QCA considers that these investments can no longer be excluded from reference tariffs and allowable revenues on this basis. In particular:

- the period of initial uncertainty with forecast volumes due to ramp-up issues has passed and it has become clearer the extent of railings forecast to materialise; and
- Aurizon Network has been able to identify relevant beneficiaries from these investments (for example, in the Moura System where forecast volumes support a socialised reference tariff after inclusion of these investments).

The QCA's decision is consistent with that foreshadowed in the QCA's consideration of the 2016 Undertaking, where it was stated that 'the continued applicability of pricing mechanisms such as the revenue deferral mechanism—will be considered as part of future approval processes'.[58]

The QCA's decision is that the following arrangements are appropriate to approve:

- Blackwater System—Aurizon Network's 2017 DAU proposal to include the WIRP investments in the opening value of the RAB, which Aurizon Network proposed to recover from WIRP

[58] QCA, 2016c, Vol III — Pricing and tariffs: 247.

Blackwater users. This includes capitalisation of foregone returns to compensate Aurizon Network for the deferral in the previous regulatory period.[59]

- Moura System—Aurizon Network's March 2018 submission to cease WIRP capital/revenue deferrals in the Moura System for the UT5 pricing period, as Aurizon Network has identified relevant beneficiaries of these investments.[60]
  - To the extent that Aurizon Network is unable to identify beneficiaries of this installed capacity, then Aurizon Network will need to consider these investments given Aurizon Network's acceptance of the additional risks associated with this WIRP investment (see below).
  - The QCA notes that with total Moura System forecast volumes, this results in a socialised Moura System reference tariff after the inclusion of the previous deferrals (that is, no system premium is payable). As such, all Moura System access holders benefit, even with the inclusion of these past investments, including existing access holders.
- WIRP balloon loop costs—Aurizon Network proposed that these costs be recovered from WIRP Blackwater users—noting that no other users are forecast to rail to WICET during the UT5 pricing period.[61] The QCA notes that these users are the beneficiaries of this installed capacity.
- NAPE—Aurizon Network's March 2018 submission to include previously deferred NAPE investments as it is now clear that railings are expected to commence during the UT5 pricing period.[62]

Additional risks

The QCA considers it appropriate for Aurizon Network to cease deferring the recovery of capital/revenue for WIRP investments. While the volume ramp-up remains lower than initial expectations, the QCA considers it is not appropriate to continue to defer revenues as this compounds Aurizon Network's asset stranding risks beyond those envisaged in the WIRP access conditions report.

Relevantly, Aurizon Network said ongoing revenue deferrals would effectively prevent it from recovering revenue/capital on projects that were approved by users, which would increase its exposure to asset stranding risk and impact on its future incentives to invest.[63]

Aurizon Network is entitled to recover its WIRP investment, as this is commensurate with the regulatory and commercial risks that it has assumed—including the additional risks accepted as part of the access conditions for its WIRP investment.[64] In forming this view, the QCA considers that Aurizon Network has been compensated, in terms of the WIRP fee arrangements, for assuming the asset stranding risks associated with its WIRP investment, as proposed in the access conditions report for the WIRP investment.

[59] Note that the inclusion of capitalisation of foregone returns to compensate Aurizon Network for the deferral in the previous regulatory period requires corresponding adjustments to the reconciliation of the 2016 Undertaking capital carryover account to avoid double counting (see section 3.2.6).
[60] Aurizon Network, sub. 40: 52–53.
[61] Aurizon Network, sub. 40: 25–26.
[62] Aurizon Network, sub. 1: 130–31.
[63] Aurizon Network, sub. 1: 129.
[64] QR 2011. For instance, other risks assumed by Aurizon Network include site remediation costs. These additional risks are outlined in the relevant access conditions report.

Specifically, the WIRP access conditions report stated:

Optimisation risk: asset stranding

[Aurizon Network] is not compensated for this risk under the regulated WACC. The beta underpinning that WACC has been referenced to the risk profile of electricity network businesses. In [Aurizon Network's] view, apart from the concentrated nature of the investment it is undertaking, no valid comparison can be made between the stranding risk its investors are exposed to on WIRP and the risk of asset stranding for electricity network infrastructure. [Aurizon Network] maintains that some compensation is reasonable and is considered particularly important in this context given the nature and size of the investments it is being asked to commit to in an uncertain environment.

[Aurizon Network] could further mitigate this risk by requiring the customer to enter into an access agreement which aligns with the assumed economic life on the basis of strong take or pay obligations. However, this is considered undesirable as the life of the assets in the Regulatory Asset Base may exceed the expected mine life. However, these arrangements only transfer the risks between parties and do not reduce the value of those risks as the longer term demand and policy risks are largely outside of the control of the user and [Aurizon Network]. As discussed in the previous section [Aurizon Network] is not seeking to transfer those risks to users.[65]

Further, the WIRP access conditions report outlined the following compensation arrangements for bearing the asset stranding risk:[66]

Additional Risk	*Description of Risk*	*Nature of the Risk*	*Proposed Risk Mitigation*
Asset Stranding Risk	*The risk that projected revenues are not fully recovered by the end of the economic life of the assets.*	*Risk that during the term of the agreements or at the expiry of the agreements a material proportion of the economic value of the value of the project is unrecovered and market demand does not sustain pricing triggering an optimisation event*	*[Aurizon Network] is not seeking to mitigate this risk through alignment of contract term to economic life with 100% take or-pay. Risks are transferred from users to [Aurizon Network]. According compensation for bearing these risks are included in the quantum of the WIRP Fee.*

If the QCA were to impose capital/revenue deferrals that were not subsequently recovered, it could unnecessarily create an asset stranding risk for which Aurizon Network has not been compensated—in terms of either the QCA's approved UT5 WACC or the commercially negotiated WIRP fee arrangements.

As such, it would not be prudent for the QCA to continue revenue/capital deferrals, as this could prejudice the full asset stranding risk assumed by Aurizon Network. Indeed, revenue/capital deferrals sought to address delayed volume ramp-up issues and the associated short-term uncertainties during the latter part of the UT4 period. It is not reasonable to continue the deferral indefinitely as this could increase Aurizon Network's risks beyond that contemplated in the access conditions report. That said, Aurizon Network has assumed the asset stranding risk for these investments.

On this basis, the QCA considers that Aurizon Network's proposal to recover its investment from WIRP Blackwater (and WIRP Rolleston) system users is appropriate to approve because it appropriately balances the legitimate business interests of Aurizon Network (s. 138(2)(b)) and

[65] QR 2011: 17.
[66] QR 2011: 19.

other stakeholders (s. 138(2)(e) and (h)) as well as providing appropriate incentives to encourage efficient use of and investment in the network, consistent with the object of Part 5 of the QCA Act (s. 138(2)(a)).

Identification of beneficiaries

The QCA considers that it is also appropriate to approve Aurizon Network's March 2018 submission to cease the Moura WIRP and NAPE deferrals. In particular, the identification of appropriate beneficiaries of these investments and greater certainty about relevant customers' railings make it appropriate for Aurizon Network to recover these WIRP investments.

Aurizon Network has also proposed the allocation of WIRP balloon loop costs to other WIRP customers, as these customers benefit from the use of this infrastructure. The QCA considers that any alternative approach of socialisation of these costs to non-WIRP users would result in unwarranted cross-subsidisation. In addition, the QCA considers that imposing deferrals associated with the WIRP balloon loop costs could prejudice the additional risks assumed by Aurizon Network (that is, asset stranding risk assumed for the WIRP investments). The QCA therefore considers it appropriate to share this cost amongst WIRP users that use this part of the network.

The decision to approve Aurizon Network's 2017 DAU proposal and March 2018 submission in regard to the cessation of capital/revenue deferrals is likely to promote economically efficient investment in the CQCN (s. 138(2)(a)). It is also in the legitimate business interests of Aurizon Network that such deferrals cease (s. 138(2)(b)), and in the interests of access holders and access seekers to not assume the additional risks Aurizon Network has already been compensated for in its approved access condition report for WIRP investments.

WIRP deferrals

In support of its 2017 DAU proposal and March 2018 submission, Aurizon Network submitted a history of the recent GAPE/NAPE and WIRP expansions. Aurizon Network noted that customers signed up to these expansions when coal prices were high, but when coal prices fell, many miners made commercial decisions to delay ramp-up or to place mines under care and maintenance. Aurizon Network said that such decisions were outside of its control.[67] Aurizon Network indicated that in UT4 approximately $260 million of WIRP capital expenditure was deferred.[68] Aurizon Network's March 2018 submission outlined that the Baralaba mine was a key beneficiary of these investments on the Moura System.[69]

The QCA notes that Aurizon Network voluntarily submitted the 2016 Undertaking on the basis of accepting WIRP deferrals, notwithstanding Aurizon Network's reluctance to defer revenue without a sunset date being specified.[70]

Aurizon Network submitted that the imposition of revenue deferrals by the QCA in UT5 would result in Aurizon Network being made responsible for risks that are outside of its control.

> The QCA position over UT4 was to address this matter through the application of deferrals. However, all this does is place both RAB fragmentation and the demand risk onto Aurizon Network for no additional compensation.
>
> As such, both the policy outcomes and revenue positions within the Access Undertaking must address these risks.

[67] Aurizon Network, sub. 1: 127–29.
[68] Aurizon Network, sub. 1: 129.
[69] Aurizon Network, sub. 40: 26, 52–53.
[70] Aurizon Network, sub. 1: 130.

> The UT4 Final Decision to defer a significant portion of the capital costs of the WIRP has magnified Aurizon Network's coal risk exposure. The decision to not allow full socialisation of capital costs was ostensibly because of a change in coal market conditions that meant some mines chose to delay the commencement of their operations or prolong the ramp-up after Aurizon Network had constructed the infrastructure. However, deferring the collection of Aurizon Network's return on capital and depreciated capital costs until a future period (for which there is greater market uncertainty for coal, including the number and profitability of customers) means Aurizon Network holds long term coal demand risk.[71]

In contrast, the QRC and Glencore submitted that revenue deferrals are NPV-neutral for Aurizon Network, and are therefore not a risk to Aurizon Network.[72, 73] The QRC also said that the WIRP infrastructure was developed based on access conditions that included an additional WIRP fee for risks borne above those compensated for through the regulatory WACC.[74]

In respect of Aurizon Network's proposals, the QRC supported the continued deferral of WIRP Moura related revenue/capital, given the uncertainty of the timing of future production. The QRC opposed cessation of the WIRP Blackwater deferrals as proposed by Aurizon Network. The QRC also opposed the reallocation of WIRP Moura balloon loop costs to other WIRP customers, as it considered this to represent unwarranted cross-subsidisation. The QRC also suggested that consideration be given to a staged introduction of WIRP capital into the RAB.[75]

The QRC subsequently noted the QCA's Final Decision on UT4 which required the deferral of WIRP Blackwater for a range of reasons. The QRC said it was not aware of any changes in circumstances which ought to lead to a different conclusion under UT5. In particular, it did not consider it appropriate that other users of the system (in this case, the WIRP users who are railing during the UT5 period) should bear the costs of customers who contracted for WIRP services but are not expected to rail during the UT5 period.[76]

In its March 2018 submission, the QRC said that despite its continuing concerns, it accepted the QCA's position on this issue. The QRC noted that the revenue deferral was a key element of Aurizon Network's WACC submission in terms of claimed differences in risk between Aurizon Network and regulated electricity and water businesses.[77]

Anglo American submitted that there is no clearly established basis for deferred revenue tonnes coming on-line to support Aurizon Network's proposal to recover $234 million of deferred WIRP revenue. Anglo American said that Aurizon Network was effectively making users who are not in default bear the cross-default risks for non-railing users indefinitely.[78]

The QCA notes that cross-default risks, of the nature suggested by Anglo American, were not contemplated in the access conditions report and were therefore not listed among the risks assumed by Aurizon Network. Blackwater and Moura WIRP users agreed to the WIRP expansion and the package of access conditions with Aurizon Network. In this regard, the risk is appropriately allocated to WIRP users, given that as a group they, and not Aurizon Network, triggered the investment and ultimately determine the volumes railed to WICET.

[71] Aurizon Network, sub. 1: 24–25.
[72] Glencore, sub. 60: 5.
[73] Glencore, sub. 60: 5. QRC, sub. 21: 51.
[74] QRC, sub. 21: 51.
[75] QRC, sub. 21: 51–52.
[76] QRC, sub. 53: 3.
[77] QRC, sub. 53: 3.
[78] Anglo American, sub. 18: 7.

Moreover, the QCA notes that the forecast volumes for the period result in a socialised Moura price with the inclusion of the deferred capital and the identification of beneficiaries of this installed capacity.

Glencore said that the QCA's decision to cease deferring any part of the WIRP costs within the Blackwater System relied on the fact that Aurizon Network did not specifically assume the risk of customer insolvency in its access conditions submissions. Glencore said this decision has the effect of imposing that risk on a limited number of access holders (i.e. the WIRP Deed parties), when it is equally true that those access holders did not execute any document in which that risk was assigned to them.[79]

Glencore said it seems unreasonable of the QCA to assume that any risk arising from the provision of infrastructure should rest with the customers of that infrastructure, unless otherwise specified by the infrastructure owner.[80] In respect of WIRP, Glencore's view was that remaining parties to the WIRP Deed should not be subjected to the default risk brought to bear by other non-railing WIRP participants.[81]

Anglo American said Aurizon Network's proposal to cease deferrals was effectively making users, who are not in default, bear the cross-default risk of non-railing users indefinitely. Anglo American said Aurizon Network undertook negotiations with WIRP project participants on an arms-length basis to the exclusion of non-WIRP users such as Anglo American, and sought commercial consideration (in addition to the revenue derived from the regulatory arrangements) to undertake the project and any related risks.[82]

Anglo American reiterated its views on how expansions ought to be priced and remained strongly opposed to existing users bearing cross-default risk for the expansion, when they were neither part of the expansion project nor allowed to be involved in, or vote on, aspects of the expansion project (in this case WIRP).[83]

Pacific National submitted that it supported revenue deferrals where appropriate, and that it had no position on whether the WIRP revenue deferrals should be discontinued in the Blackwater System. However, it sought that any expansion tariffs only be paid by WIRP or expansion users. Existing users should not be subject to reference tariff increases as a result of expansions, unless there is evidence that they benefit from such expansions.[84]

After considering stakeholder submissions in relation to WIRP deferrals, the QCA considers that these investments can no longer be excluded from reference tariffs and allowable revenues. The QCA notes that the initial period uncertainty with forecast volumes due to ramp-up issues has passed and it has become clear the extent of railings forecast to materialise. In addition, the QCA considers it appropriate for Aurizon Network to recover its WIRP investment from the relevant beneficiaries of these investments, being the WIRP users.

3.2.3 RAB roll-forward to determine the opening asset value

The QCA's decision is to approve the methodology proposed by Aurizon Network to roll forward the RAB, as it reflects the approved procedure outlined in its 2016 Undertaking and conforms with general regulatory approaches to deriving an opening asset value. However, the QCA

[79] Glencore, sub. 60: 5.
[80] Glencore, sub. 60: 5.
[81] Glencore, sub. 60: 5.
[82] Anglo American, sub. 57: 4.
[83] Anglo American, sub. 57: 5.
[84] Pacific National, sub. 61: 20.

considers that the opening asset value should take into account actual inflation and revised capital expenditures.

The QCA's decision is that the opening asset value of the RAB be derived by:

- incorporating approved capital expenditure claims up to 2016–17[85]
- rolling forward Aurizon Network's RAB adjusting for depreciation and inflation.

Aurizon Network submitted that the RAB would be adjusted for actual observed inflation for 2013–14, 2014–15 and 2015–16, and 2.5 per cent for 2016–17.[86] Depreciation charges used in the roll-forward were based on the asset lives set out in Appendix E.

Anglo American expressed concern about the lack of information on the RAB build-up. It said that a detailed bottom-up build-up of the RAB should be made available so that users can see the detailed assets and other granular aspects including asset write-offs.[87]

In response, Aurizon Network added that users have visibility on capital to be included in the RAB through consultation on the capital expenditure approval process. The QCA's independent consultant reviews the capital expenditure on an *ex post* basis, and findings are published for consultation.[88]

In regard to Anglo American's comments, and Aurizon Network's response, the QCA agrees that there is detail afforded through the capital expenditure approval process. A bottom-up build of the RAB at every undertaking period would be a costly and exhaustive exercise. The QCA does not consider this in Aurizon Network’s legitimate business interests (s. 138(2)(b)) or the interests of access holders and access seekers (s. 138(2)(e), (h)). The QCA considers that further detail is required where assets are removed from the RAB, subject to the materiality of the amounts, and that this process should be undertaken as part of the annual RAB roll-forward process contained in Aurizon Network's 2017 DAU.[89]

3.2.4 Direct allocation of the CQCN RAB to non-coal services

QRC, in its response to the QCA’s request for comment on the calculation of non-coal allocations of Aurizon Network’s maintenance costs, said there should be an allocation of a portion of the RAB to non-coal services to reflect that portion of capacity in the network that is not available for use by coal services. QRC said the QCA should perform a holistic assessment of how Aurizon Network’s regulated asset base is calculated to fairly reflect the impact of non–coal services.[90]

While the QCA does not support the QRC’s proposal, the QCA has concerns regarding the lack of rigour underlying Aurizon Network’s allocation methods, more broadly. The QCA suggests a broader allocation approach that makes a general adjustment for non-coal traffic at the total allowable revenue level be given consideration in future investigations. Such an approach could consist of:

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[85] The 2016–17 claim remained subject to QCA approval at the time Aurizon Network submitted its 2017 DAU in November 2016 but has since been approved.
[86] Since Aurizon Network's submission, the actual inflation rate for 2016–17 has been 1.83 per cent.
[87] Anglo American, sub. 18: 8.
[88] Aurizon Network, sub. 26: 11–12.
[89] Refer to cl. 1.1(c) of Schedule E.
[90] QRC, sub. 65: 7.

- approval of an *ex ante* total allowable revenue, prior to any deductions for costs associated with non-regulated and non-coal services
- adjustment of the *ex ante* total allowable revenue to exclude indicative revenues from non-coal services to establish the maximum allowable revenue and reference tariffs for coal-carrying traffic only
- an *ex post* reconciliation of allowable and actual revenues from non-coal services, and appropriate adjustments to approved revenues and reference tariffs for coal-carrying train services.

Such an approach would encourage a more transparent recognition of non-coal and non-regulated costs and remove the need for detailed scrutiny of allocation parameters.

3.2.5 Equity-raising cost allowance

Aurizon Network's 2017 DAU proposed that equity raising costs of $12.1 million be included in the opening value of the RAB. This is allocated between the systems as follows: Blackwater, $5.79 million; Goonyella, $5.67 million; Moura, $0.38 million; Newlands, $0.36 million.[91]

Aurizon Network should recover prudent and efficient equity-raising costs, although the QCA notes that this should be based on QCA-approved capital expenditure.

Under cl. 1.4 of Schedule E of the 2016 Undertaking, equity-raising costs are to be estimated using the benchmark capital structure of 55 per cent debt to 45 per cent equity, and are to be allocated between the coal systems according to share of capital expenditure.

Aurizon Network did not allocate equity-raising costs to GAPE and WIRP, as it considered these costs were not incremental in nature.[92]

Aurizon Network subsequently provided updated information on its proposed equity raising costs, taking into account recent QCA decisions to approve capital expenditure for 2015–16. Aurizon Network proposed equity-raising costs of $11.25 million (as at 30 June 2017).

The QCA's decision is to approve equity-raising costs as outlined in Table 13.

Table 13 QCA decision on equity-raising costs ($ million, nominal)

System	*Aurizon Network, November 2016*	*Aurizon Network, October 2017*	*QCA draft decision*	*Aurizon Network, March 2018*	*QCA decision*
Blackwater	5.8	5.3	7.7	7.7	7.7
Goonyella	5.7	5.2	2.9	2.9	2.9
Moura	0.4	0.4	0.4	0.4	0.4
Newlands	0.4	0.3	0.2	0.2	0.2
Total	**12.2**	**11.3**	**11.3**	**11.3**	**11.3**

The QCA notes that while the total equity-raising cost set out in this decision is similar to Aurizon Network's October 2017 claim, the allocation between the Blackwater and Goonyella Systems is significantly different. This is largely due to the inclusion of WIRP capital expenditure

[91] Aurizon Network, sub. 1: 135–136.
[92] Aurizon Network, sub. 1: 135.

in the Blackwater System that was deferred in UT4. Aurizon Network's March 2018 submission accepted this approach.[93]

The QCA considers this appropriate since equity-raising costs are assumed to be incurred to finance capital expenditure (and not just on the portion that is recovered in the corresponding undertaking period).

3.2.6 Reconciliation of the 2016 Undertaking capital expenditure carryover account

Aurizon Network submitted its capital expenditure carryover account to reflect the NPV of the difference between revenues Aurizon Network was entitled to earn from the capital indicator, against its revenue entitlements for actual capital expenditure incurred, during the UT4 period.

In its 2017 DAU proposal, Aurizon Network said it had taken account of the approved UT4 capital indicator as well as final capital expenditure amounts for 2013–14 and 2014–15 and revised forecasts for 2015–16 and 2016–17, and that it had adjusted the UT5 revenues to reflect the forecast balance of the capital expenditure carryover account.

Aurizon Network's 2017 DAU submission proposed a total capital expenditure carryover account balance at 1 July 2017 of $47.7 million as an under-recovery.[94] Aurizon Network proposed this be revised to $42.9 million to take account of the QCA approved capital expenditure for 2015–16 and 2016–17.[95]

Aurizon Network's proposal indicated that it had overspent against the capital indicator during the 2016 Undertaking period. This was due in part to inclusion of revised capital expenditure on the Network Asset Management System (NAMS) project and inclusion of the Remote Control Signalling system in the GAPE project.[96]

The QCA considers that Aurizon Network's proposal overstates the balance of its capital expenditure carryover account as it does not give regard to the modelling assumptions that included capitalisation for deferred investments (for example, Blackwater, Rolleston, and related WIRP capital expenditure in 2014–15).

In calculating UT4 reference tariffs, WIRP capital expenditure was deferred from 2014–15 until at least 2015–16.[97] This included capitalisation of the foregone returns in recognition of this deferral.

The 2016 Undertaking requires the capital expenditure carryover account be determined using the modelling parameters and assumptions used to calculate reference tariffs.[98] The QCA has therefore deferred a portion of the actual WIRP capital expenditure for 2014–15 (capitalised at the UT4 WACC) to 2015–16, the year this expenditure entered the RAB for the purpose of calculating UT4 revenue allowances (used to determine reference tariffs).[99]

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[93] Aurizon Network, sub. 40: 49, 53.
[94] Aurizon Network, sub. 1: 135.
[95] Aurizon Network, sub. 1: 133, sub. 40: 54. The 2016–17 claim was approved by the QCA on 19 July 2018.
[96] Aurizon Network, sub. 1: 132–133.
[97] WIRP capital expenditure associated with train services expected to rail during UT4 was deferred to 2015–16. Capital expenditure associated with WIRP train services not expected to rail during UT4 was deferred to the end of the UT4 period.
[98] Cl. 5(c) of Schedule E of Aurizon Network's 2016 Undertaking.
[99] The QCA notes that this approach is also consistent with Aurizon Network's approach for calculating the capital expenditure carryover account balance for GAPE (which excludes from 2013–14, capital expenditure that has been deferred).

Aurizon Network's March 2018 submission did not address these cashflow reconciliation matters. Rather, Aurizon Network considered that the capital expenditure should be included in 2014–15 due to both the WIRP Blackwater customers utilising the infrastructure from April 2015 and the QCA approving the WIRP capital expenditure to enter the RAB as part of the QCA approved 2014–15 capital expenditure claim.[100]

The QCA notes that the UT4 approved capital indicator only includes WIRP capital expenditure associated with train services expected to rail during UT4 and defers capital expenditure commissioned in 2014–15 to 2015–16 with the under recovery capitalised at the approved WACC (Table 14).[101]

Table 14 UT4 approved capital indicator and actual capital expenditure for WIRP ($ million)[a]

	Year of inclusion in the RAB		
	2014–15	***2015–16***	***2016–17***
Capital indicator	–	621.4[b]	–
Profile of actual capital expenditure – Aurizon Network's 2017 DAU	294.8	307.4	1.5
Profile of actual capital expenditure – QCA decision	–	623.3[b]	1.4

Note: (a) – Figures are nominal, reported as mid–year values and include interest during construction; excludes component deferred until UT5; (b) – A portion of this expenditure was commissioned in 2014–15 and has been capitalised at the UT4 approved WACC.

Aurizon Network's proposal incorporates a return on actual 2014–15 WIRP capital expenditure that has been capitalised and rolled into the opening RAB for 2015–16.[102] As such, the QCA does not consider it appropriate to also recover a return on and of actual 2014–15 capital expenditure in 2014–15, for the purpose of calculating the capital expenditure carryover account balance. This also ensures consistency with the modelling parameters and assumptions used to calculate reference tariffs (as required under cl. 5(c) of Schedule E of Aurizon Network's 2016 Undertaking).

The QCA has applied the same approach to calculate the capital expenditure carryover account balance in cases where it has deferred the recovery of capital/revenue by capitalising at WACC within approved revenues and reference tariffs. For example, Byerwen GAPE is treated as entering the RAB in 2016–17 as the recovery was deferred to 2016–17, including capitalising the deferral at the WACC, as part of the QCA's decision on the 2016 Undertaking.

The QCA has used mid-year values for forecast capital expenditures to ensure a consistent modelling approach with UT4. The QCA has also used Aurizon Network's updated tax deprecation to complete the reconciliation process.[103]

For the reasons set out above, the QCA's decision is that Aurizon Network's capital expenditure carryover balance be updated to include the 2015–16 and 2016–17 capital expenditure

[100] Aurizon Network, sub. 40: 53.
[101] QCA 2014, pp. 243–244, 251–252.
[102] This treatment was also applied in Aurizon Network's proposed (and approved) 2014–15 RAB roll-forward. See Aurizon Network's letter to the QCA submitting the RAB roll forward for 2014–15 http://www.qca.org.au/getattachment/cf985de1-7320-4b14-9e51-0aa094344f3e/Aurizon-Network-Regulatory-Asset-Base-Roll-Forwa.aspx
[103] Aurizon Network, sub. 40: 54.

amounts is appropriate to approve. The capital expenditure carryover amount, based on the QCA's updated analysis, is $2.5 million (1 July 2017 value).

This decision balances the interests of Aurizon Network, access seekers and access holders (ss. 138(2)(b),(e) and (h)) as it appropriately compensates Aurizon Network for revenue deferrals that relate to recent capital expenditure, while not including the double counting of capitalised costs to be recovered from users.

Table 15 Capital expenditure carryover account for the 2017 DAU ($'000, 1 July 2017)

System	*Non-electric*	*Electric*	*Total*
1. 2017 DAU			
Blackwater (incl Rolleston & Minerva)	34,313.5	1,805.3	36,118.8
Goonyella (incl Hail Creek & Vermont)	4,006.9	11,579.9	15,586.8
Moura	3,362.6		3,362.6
Newlands	1,419.8		1,419.8
GAPE (incl GSE)	(8,809.9)		(8,809.9)
Total	**34,292.99**	**13,385.2**	**47,678.1**
2. Aurizon Network March 2018 submission[104]			
Blackwater (incl Rolleston & Minerva)	30,805	3,588	34,393
Goonyella (incl Hail Creek & Vermont)	1,958	10,794	12,752
Moura	2,468		2,468
Newlands	1,113		1,113
GAPE (incl GSE)	(7,790)		(7,790)
Total	**28,553**	**14,382**	**42,936**
3. QCA decision			
Blackwater (incl Rolleston & Minerva)	(6,410)	800	(5,609)
Goonyella (incl Hail Creek & Vermont)	1,188	10,759	11,947
Moura	2,814		2,814
Newlands	1,111		1,111
GAPE (incl GSE)	(7,791)		(7,791)
Total	**(9,088)**	**11,559**	**2,471**

3.3 UT5 capital indicator

Aurizon Network's 2017 DAU proposal

In its 2017 DAU, Aurizon Network proposed reference tariffs and revenues that included forecast capital expenditure of $778 million (mid-year values) over the four years.[105]

[104] Aurizon Network, sub. 40: 54.
[105] Aurizon Network, sub. 1: 138.

Table 16 Aurizon Network's capital indicator by system and traction type ($'000)

	2017–18	*2018–19*	*2019–20*	*2020–21*	*Total UT5*
Blackwater	86,452	73,563	67,129	69,497	296,641
Goonyella	102,220	88,232	80,699	75,121	346,272
Moura	9,293	7,845	7,114	7,137	31,390
Newlands	26,903	25,681	25,176	26,219	103,977
Total	**224,868**	**195,320**	**180,118**	**177,974**	**778,281**
Indicator by traction type					
Non-electric	214,157	184,609	169,407	167,263	735,436
Electric	10,771	10,771	10,771	10,771	42,844

Note: Figures are nominal, reported as mid-year values and include interest during construction.[106]

Aurizon Network stated that the capital indicator comprises primarily of renewal projects, with the balance reflecting costs associated with post-commissioning projects and other projects not classified as expansions or renewals. Aurizon Network's proposal excluded capital associated with future expansion projects.[107]

QCA analysis and decision

Summary of decision 3.3

- **The QCA's decision is that the appropriate way for Aurizon Network to amend its draft access undertaking is to include allowable revenues and reference tariffs to reflect the capital indicator outlined in Table 17.**
- **This includes transitional arrangements outlined in Table 20 and Table 21 relating to:**
  - **(a) Infrastructure Delivery corporate overheads that were previously treated as capitalised costs to be expensed from 2019–20, consistent with the Aurizon group capitalisation policy (see 7.6.3); and**
  - **(b) Ballast undercutting renewal costs that were previously treated as maintenance expense to be capitalised from 2019–20. The QCA's decision has included accelerated depreciation as a further interim measure to address the transition process for these costs.**

  The QCA's decisions on these matters should be read in conjunction with Chapters 7 and 8.
- **The QCA's decision is to approve Aurizon Network's methodology to forecast interest during construction.**

The QCA has assessed each element of Aurizon Network's proposed capital indicator and considers it not appropriate to approve, having regard to the factors at s. 138(2) of the QCA Act.

The QCA considers Aurizon Network's 2017 DAU proposed capital indicator requires amendment as it does not appropriately balance Aurizon Network's legitimate business interests, the public interest, and the interests of access seekers and users. In addition, such an

[106] Aurizon Network, sub. 1: 138–39.
[107] Aurizon Network, sub. 1: 138.

outcome would not promote the economically efficient operation, use of and investment in infrastructure underpinning the declared service.

The QCA’s decision is that the capital indicator be amended to $920.4 million, based on:

- consideration of the reliability of forecasts used to develop the capital indicator (section 3.3.1) and alternative approaches to capital expenditure forecasts (section 3.3.2)
- treatment of ballast undercutting renewal capital expenditure (section 3.3.3) and Infrastructure Delivery corporate overheads (section 3.3.4)
- inclusion of interest during construction for forecast capital expenditure (section 3.3.5).

The QCA's decision relating to the capital indicator is provided by system and traction type in Table 17 and by category in Table 18.

Table 17 QCA’s approved capital indicator by system and traction type ($'000)

System	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total UT5*
Blackwater	100,708	85,465	115,419	121,829	423,420
Goonyella	95,364	84,029	109,182	106,847	395,422
Moura	9,310	15,001	15,539	11,336	51,186
Newlands	13,526	10,825	8,738	6,961	40,050
GAPE	5,961	--	2,022	2,331	10,314
Total	**224,868**	**195,320**	**250,899**	**249,304**	**920,392**
Indicator by traction type					
Non-electric	218,879	183,179	240,976	236,972	880,005
Electric	5,989	12,142	9,924	12,332	40,387

Note: Figures are nominal, reported as mid-year values and include interest during construction.

Table 18 QCA’s transitional arrangements for reclassification of capitalisation costs

Program	*$,000 total*	*Per cent*
Civil structures (bridges, culverts and pipes)	244,140	27
Civil track excluding rail	172,037	19
Ballast undercutting renewals	154,776	17
Rail renewal	127,630	14
Signalling and control systems	90,114	10
Strategy and other, including NAMS	66,482	7
Traction power	39,847	4
Telecommunications	13,064	1
Capitalised overhead costs	12,303	1
Total	**920,393**	

Note: Figures are nominal, reported as mid-year values and include interest during construction.

The QCA notes Aurizon Network’s March 2018 submission requested the QCA not approve its 2017 DAU proposal to account for its submitted changes to the recognition of Infrastructure

Delivery corporate overheads that were previously treated as capitalised costs, as well as significant changes to the allocations of the capital indicator to different systems.

Table 19 Aurizon Network's March 2018 submission capital indicator ($'000)

System	***2017–18***	***2018–19***	***2019–20***	***2020–21***	***Total UT5***
Blackwater	97,979	82,748	76,912	83,556	341,194
Goonyella	92,780	81,357	75,873	73,172	323,182
Moura	9,057	14,524	12,829	8,606	45,017
Newlands	13,160	10,480	8,172	6,308	38,121
GAPE	5,800	—	—	—	5,800
Total	**218,776**	**189,109**	**173,785**	**171,642**	**753,313**
Indicator by traction type					
Non-electric	212,949	177,354	163,862	159,310	713,474
Electric	5,827	11,756	9,924	12,332	39,838

Aurizon Network said this revised scope is more relevant and is developed by applying a detailed framework where the change in spend profile within systems and across asset classes is a reflection of the updated data available in its systems.[108] These system allocations are materially different from Aurizon Network's 2017 DAU proposal.

Aurizon Network said its revised capital indicator also includes a reduction for amounts, which relate solely to the corporate overheads of the Infrastructure Delivery division, which from 1 July 2017 are within Aurizon Network.[109]

The QCA notes that Aurizon Network's financial model included $17.5 million for capital renewals in Minerva within the revised capital indicator which Aurizon Network proposes to fully recover within the UT5 regulatory period. The QCA has accepted this proposed change, as this would also be subject to the carryover account reconciliation and *ex post* capital expenditure assessment processes.

The QCA's decision provides for an indicative amount of capital expenditure to be included in Aurizon Network's reference tariffs and allowable revenues during the UT5 pricing period. This is in the interests of all parties as it promotes efficient investment in the network and minimises the cash flow impacts of timing differences between when approved capital expenditure is included into the RAB and recovered from access holders. The QCA's reasoning is outlined below.

3.3.1 Reliability of forecasts used to develop the capital indicator

Aurizon Network said that its approach for forecasting scope and cost of asset renewals involves a pro-active management of assets and a steady state average scope that is smoothed across disciplines to balance track possession requirements, resourcing limitations and funding constraints. This includes references to:

- the engineering /useful life of assets
- Aurizon Network's Civil Engineering Track Standards (CETS)
- Aurizon Network's asset maintenance and renewals policy which optimises the balance between maintenance and renewals
- historical and forecast gross tonne kilometres by system.[110]

Almost a third of its proposed capital indicator relates to rail renewal. Aurizon Network advised that most of the rail laid during the 1980s and 1990s will need to be replaced between 2016 and 2040 based on Aurizon Network's CETS. Aurizon Network said that it has become evident that rail needs to be replaced at a higher rate than previously envisaged.[111]

Anglo American submitted that there was little detail around the proposed $778 million to be claimed over the UT5 period. Anglo American's concerns were:

- There is no oversight from a concept or pre-feasibility stage of what non-expansion projects are actually required until after the fact.
- Aurizon Network defines the scope and activity of the projects, and is incentivised to undertake capital renewal projects to increase the value of the RAB and allowable revenues.
- The capital program is material in value and requires appropriate scrutiny, including how it is built into reference tariffs.[112]

The QRC agreed that the capital indicator should not include expansion projects. The QRC queried whether the proposed capital renewal projects are efficient, noting that there is insufficient information for it to assess the prudency and efficiency of the projects. The QRC said it relies on the QCA to review prudency and efficiency, including the inter-relationship between renewal costs and maintenance costs.[113]

Aurizon Network noted that the capital indicator was not detailed given it is only a forecast of capital expenditure, and that actual capital is only included in the RAB after an *ex post* assessment by the QCA. Although, Aurizon Network provided information on how the scope of its capital indicator was derived—that is, a prioritised asset renewal listing takes account of asset condition, location criticality (tonnage over asset, impact of outages and impact on velocity).[114]

Aurizon Network also provided details of the capital renewal plan for 2017–18, showing for each coal system the kilometres of rail renewal, kilometres of track upgrades, number of turnout renewals, number of sleepers renewed, structures renewals and data communications upgrades.[115]

The QCA notes that there has been an increasing trend in renewals expenditures over successive pricing periods. The average proposed annual expenditure was $17 million in UT3, $128 million in UT4 and $195 million in UT5 (all nominal terms). This rising trend in forecast capital expenditure reflects to some extent a catch-up of the capital replenishment rate from 1 per cent per year from 2005–06 to 2011–12, to around 2.7 per cent of the opening RAB for the

[110] Aurizon Network, sub. 1: 139–40.
[111] Aurizon Network, sub. 1: 140.
[112] Anglo American, sub. 18: 8–9.
[113] QRC, sub. 21: 39.
[114] Aurizon Network, sub. 26: 13.
[115] Aurizon Network, sub. 26: 13.

UT4 period.[116] For the UT5 pricing period, the annual proposed renewals capital expenditure is 3.1 per cent of Aurizon Network's proposed opening RAB.[117]

Some guidance is available from Aurizon Network's recent capital claims. For 2015–16, Aurizon Network submitted a total $806.6 million in capital expenditure, of which $194 million related to renewals. Of this, $59 million or 30 per cent related to rail renewals and upgrades. For 2016–17, Aurizon Network submitted a total of $240.8 million, of which $175.7 million was for renewals, including $59.7 million in rail renewals and upgrades. These amounts closely approximate the proposed amounts for UT5 ($195 million in total renewals and $58.4 million or 30 per cent for rail renewals and upgrades).

The QCA considers a capital indicator reflects a reasonable approach for including planned capital expenditure into reference tariffs and allowable revenues. This is in the interests of all parties. This promotes efficient investment in the network and minimises the impacts of timing differences for when the QCA approves capital expenditure into the RAB.

3.3.2 Alternative approaches to forecasting capital expenditure

Anglo American proposed that the capital indicator to apply for each system should be presented to, and endorsed by, a 'rail capacity group' made up of users in each system before being provided to the QCA for approval.[118] In response to this proposal, Aurizon Network noted that there is a comprehensive *ex post* audit review conducted by the QCA and Aurizon Network takes on the risk that capital will be included in the RAB. At the end of the regulatory period, if there is a difference between the indicator and actual approved capital expenditure, the revenue will be trued up via the capital carryover mechanism. Aurizon Network also said that it has consulted with stakeholders, for example at the Annual Maintenance Symposium in March 2017, and that it will look to provide greater ongoing transparency to users.[119]

Under the current *ex post* assessment approach, Aurizon Network accepts some risk that expenditures that have been already incurred could be excluded by the QCA if not considered prudent and efficient. Regardless of the amounts set out in the capital indicator, Aurizon Network therefore has an incentive to ensure that its capital expenditures meet the required prudency of scope and efficiency of standard and cost.

The QCA sought stakeholder views on incentive frameworks, including *ex ante* approaches for renewals expenditures that reduced the level of regulatory oversight. The QCA noted that greater efficiencies should be possible if a full *ex ante* evaluation of renewals was implemented in place of the annual *ex post* assessment. This framework could provide an incentive framework to achieve efficient renewals expenditures over future regulatory periods and provide greater within-period certainty to users, while reducing the level of regulatory oversight.

In its response to the draft decision, the QRC said it is open to considering such arrangements but the key issue to be addressed would be how to ensure that Aurizon Network is not

[116] QCA 2016c, Volume IV—Maximum Allowable Revenue: 160.
[117] Aurizon Network proposed an opening RAB of $6.225 billion and annual renewals averaged $195 million per year.
[118] Anglo American, sub. 18: 8.
[119] Aurizon Network, sub. 26: 14.

rewarded for under-delivering on the scope or standard of projects, and how to ensure that budgeted costs are not inflated.[120]

Anglo American said that while it appreciated the proposal was well intentioned, it was concerned that it could produce unintended adverse consequences like the issues raised by the QRC.[121]

Anglo American was concerned that the switch to an *ex ante* approval:

- will exacerbate the issues arising from the lack of detail, and
- is being proposed without any guarantee that greater information will be available so that the budget can be approved as reflecting the efficient costs with greater certainty than is currently the case.[122]

Anglo American acknowledged that a bottom-up build up can be costly, but that it cannot be appropriate to allow Aurizon Network to levy access charges based on an inefficient regulatory asset base, merely because it is easier.[123]

Anglo American submitted the *ex post* annual assessment at the very least, ensures that each capital item is reviewed to ensure it was prudent and efficient. Anglo American said this seems far more likely to promote the object of efficient investment in infrastructure, than the proposed model absent reliable information and a transparent capital approvals process.[124]

Anglo American noted the benefits from an equivalent of the 'Rail Capacity Group' process used in ARTC's Hunter Valley rail network. Such a group (or its equivalent made up of the appropriate users of each system) would review, endorse, support and monitor the capital projects subsequently presented to the QCA by Aurizon Network for approval. Anglo American contended this would promote a streamlined approval process. Anglo American noted that, if the group does not support any aspects of the claim, Aurizon Network could secure regulatory approval under the relevant criteria.[125]

Anglo American submitted that the introduction of such a group should be considered, irrespective of the approach to renewals expenditure. Anglo American said it would do far more to improve the efficiency of capital investment by providing transparency and facilitating greater input from stakeholders. Anglo American said this change is critical if the initial capital expenditure is going to be heavily relied on as an accurate assessment of efficient cost as would be necessary in an *ex ante* process.[126]

Anglo American submitted that introducing a rail capacity group as part of UT5 is a necessary precursor to the switch to an *ex ante* process during the post UT5 regulatory period.[127]

Glencore said the difficulties with any *ex ante* mechanism, which set a budget and then exposes Aurizon Network to the risk or benefit of over or underspending include:

- it is difficult for users of the network to make an informed view or to provide realistic comments on any draft budget, given that they are not able to access any detailed

[120] QRC, sub. 53: 9.
[121] Anglo American, sub. 57: 5–6.
[122] Anglo American, sub. 57: 6.
[123] Anglo American, sub. 57: 6.
[124] Anglo American, sub. 57: 6.
[125] Anglo American, sub. 57: 6.
[126] Anglo American, sub. 57: 6.
[127] Anglo American, sub. 57: 6.

information on the operation of the network. Therefore, it will be hard to set a budget in which users have confidence

- it is difficult to form a view on whether under or overspends against budget are caused by efficiency or by changes in scope. Glencore said this is particularly the case, given their lack of detailed knowledge about network condition at any point. Glencore claimed that currently they lack the necessary insight to determine whether cost savings have been brought about in ways which adversely impact upon system capacity, and therefore do not necessarily increase efficiency. Glencore noted that if in fact a cost saving is sufficiently destructive to network capacity, it may have a negative effect on efficiency.[128]

Glencore submitted that an *ex post* assessment of the expenditure in each year, with a pass through permitted for efficient expenditure, would better protect the interests of the users. Glencore said although there would be limited incentives for Aurizon Network to attempt to increase its efficiency, this would at least remove any incentive for it to game the system.[129]

Pacific National said it believed the *ex ante* approach will provide both increased incentives for efficient capital investment and potential greater certainty for allowed capital expenditure. Given the incentives for efficient capital investment, Pacific National supported this approach.[130]

However, its main concern with the *ex ante* approach is the potential for the capital expenditure to not be fully spent (due to exploitation of the regulatory process, changes in market conditions or efficiencies in capital renewals processes). Pacific National believed the QCA should establish a monitoring regime—perhaps similar to the current *ex post* process— to assess differences between forecast and actual capital expenditure. [131]

Pacific National also believed that any *ex ante* capital expenditures should be approved by a formal users group, similar to the RCG in operation in the Hunter Valley, established under the ARTC Hunter Valley Access Undertaking. Pacific National submitted that Section 8 and Schedule F of the 2017 DAU allow for the formal involvement of users in capital expansion projects, but believed that the involvement of a formal users capital expenditure review group will result in more efficient capital expenditure on projects of most value to users.[132] To this end, Pacific National noted that Aurizon Network's capital expenditure was previously endorsed by users under the Coal Rail Infrastructure Master Plan (CRIMP) but that this process but has been replaced by the process in Schedule F for specific capital projects.[133]

Pacific National submitted that it believed the re-establishment of a formal users group has merit, particularly in a regulatory framework with an *ex ante* capital expenditure process.[134]

The QCA acknowledges that while the current *ex post* process has deficiencies with information transparency and stakeholder involvement, it is also clear from stakeholders' responses that a full *ex ante* approach requires further consideration from all parties. The QCA maintains that all stakeholders should give full consideration to alternative approaches in order to identify incentives for efficient renewals expenditure assessments in future regulatory periods.

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[128] Glencore, sub. 60: 2.
[129] Glencore, sub. 60: 2.
[130] Pacific National, sub. 61: 20.
[131] Pacific National, sub. 61: 20–21.
[132] Pacific National, sub. 61: 21.
[133] Pacific National, sub. 61: 21.
[134] Pacific National, sub. 61: 21.

3.3.3 Treatment of ballast undercutting renewal capital expenditure

Aurizon Network included forecast direct costs for ballast undercutting renewals[135] as expenses within its 2017 DAU proposed maintenance cost allowance. However, as noted in section 8.5.3, the QCA's decision is that ballast undercutting activities classified as renewals in Aurizon Network's Asset Maintenance and Renewals Plan (AMRP) should be treated as a capitalised cost within the regulatory pricing framework during the UT5 pricing period. The QCA's analysis and reasons for this decision are set out in section 8.5.3.

To give effect to this decision, the QCA has decided to implement a 2-year transitional reclassification of Aurizon Network's ballast undercutting renewal expenditure, from maintenance expenditure to capital expenditure. Specifically, the QCA will continue to expense ballast undercutting renewal costs for 2017–18 and 2018–19 within the maintenance cost allowance, before including these costs in the capital indicator for 2019–20 and 2020–21. Actual ballast undercutting renewal expenditure incurred in 2019–20 and 2020–21 will also be subject to an *ex post* prudency and efficiency assessment under cl. 2.2, Schedule F of the 2017 DAU, prior to inclusion in the RAB.

The QCA's transitional arrangements also include concessional depreciation rates for capitalised ballast undercutting renewals. Specifically, actual prudent and efficient ballast undercutting renewal costs incurred in 2019–20 will be fully depreciated in that year, while costs incurred in 2020–21 will be depreciated over 2 years, with the subsequent capital carryover account adjusted using these parameters. From the commencement of the subsequent regulatory pricing period (UT6), the QCA's expectation is that all forecast renewal costs will be included in Aurizon Network's proposed capital indicator, and depreciated using an appropriate asset life.

The QCA's transitional approach is appropriate having regard to the potential cashflow impacts of capitalising ballast undercutting renewals costs. The transitional approach also ensures that the reclassification of costs does not apply retrospectively. That is, the change in classification of costs will not be backdated to take effect from the commencement of the UT5 pricing period, which has already passed.

The QCA's conclusion on capitalised ballast undercutting renewal allowances are set out in Table 20.

Table 20 QCA conclusion on ballast undercutting renewal capital indicator amounts for the UT5 pricing period ($m)

Category [a]	*2017–18*	*2018–19*	*2019–20*	*2020–21*
Ballast Undercutting renewals [b]	(expensed)	(expensed)	77.11	77.66

Note: (a) Costs in 2019–20 and 2020–21 have been discounted by semi-annual WACC rate of 5.7% to convert from end-of-year dollar terms to mid-year terms, consistent with the modelled cash-flow timing assumptions.; (b) Actual prudent and efficient ballast undercutting renewal costs incurred in 2019–20 will be fully depreciated in that year. Actual prudent and efficient costs incurred in 2020–21 will be depreciated over 2 years.

Treating ballast undercutting renewal costs in this manner is appropriate, having regard to the factors at s. 138(2) of the Act as it allows Aurizon Network to recover at least the efficient costs of an efficient and prudent ballast undercutting program during the UT5 pricing period. The QCA considers this approach, including the transitional arrangements, appropriately balances the interests of access seekers and access holders, and the legitimate business interests of Aurizon Network.

[135] This is referred to as ballast undercutting in Aurizon Network's 2017 DAU proposal.

The QCA's approach also advances the object of part 5 of the Act to promote the economically efficient use of, and investment in the CQCN, with the effect of promoting effective competition in upstream and downstream markets. Capitalising ballast undercutting renewal costs, and the subsequent application of an *ex post* prudency and efficiency assessment, also provides incentives to Aurizon Network to reduce costs or otherwise improve productivity, consistent with s. 168(A)(d) of the Act.

3.3.4 Treatment of Infrastructure Delivery overheads

As discussed in section 7.6.3, the QCA accepts that that the reclassification of Infrastructure Delivery overhead costs from capital to operating expenditure is reasonable in principle, and appears consistent with the Aurizon group capitalisation policy. Nonetheless, as discussed in section 7.6.3, this also represents a change in the recognition of costs and the QCA considers this reclassification should be subject to a 2-year transition period, consistent with the approach to reclassifying ballast undercutting renewal costs. Importantly, the QCA considers a transition period is also appropriate to ensure that the reclassification of costs does not apply retrospectively. That is, the change in classification of costs will not be backdated to take effect from the commencement of the UT5 pricing period, which has already passed.

Under this transitional approach, the commercial margin associated with the Infrastructure Delivery function will continue to be capitalised in 2017–18 and 2018–19, before being recognised as expensed corporate overheads in 2019–20 and 2020–21. As such, the QCA's decision on the capital indicator for the UT5 pricing period recognises Aurizon Network's March 2018 proposed reductions to the capital indicator in 2019–20 and 2020–21 only. The QCA's analysis and reasons for this decision are set out in section 7.6.3.

Actual capitalised Infrastructure Delivery overheads incurred in 2017–18 and 2018–19 will also be subject to the *ex post* prudency and efficiency assessment under cl. 2.2, Schedule F of the 2017 DAU, prior to inclusion in the RAB. The QCA has applied the standard capital indicator asset life for the purposes of determining depreciation amounts for these costs, unlike ballast undercutting renewal expenditure, which the QCA has depreciated using concessional depreciation rates.

This approach results in an overall allocation of corporate overhead which is commensurate with the amount that would have been recovered as a capital cost under the pre-restructure charging arrangements.

Treating these costs in this manner is appropriate, having regard to the factors at s. 138(2) of the Act as it allows Aurizon Network to recover at least the efficient costs of providing the Infrastructure Delivery function. The QCA considers this approach effectively balances the interest of access seekers and access holders, and the legitimate business interests of Aurizon Network.

The QCA's conclusion on capitalised infrastructure Delivery overheads is set out in Table 21.

Table 21 QCA conclusion on capitalised Infrastructure Delivery overhead for UT5 pricing period ($m)

Allowance	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*UT5 total*
Capital-funded restructure overhead allowance (Commercial margin on Infrastructure Delivery services)	6.09	6.21	(expensed)	(expensed)	12.30

Source: Aurizon Network, sub. 40: 57.

3.3.5 Interest during construction

Aurizon Network submitted that an allowance for interest during construction (IDC) compensates Aurizon Network for incurring upfront capital expenditure—Aurizon Network only recovers capital costs when the capital project has been commissioned and approved for inclusion in the RAB. Aurizon Network indicated that it has retained the methodology approved in the 2016 Undertaking approval process.

This methodology is the S-curve approach that uses forecast monthly cash flows and multiplies them by the relevant WACC. Irrespective of actual commissioning date, assets are assumed to be included in the RAB at the start of the year but are discounted to mid-year values on the assumption that revenues are received evenly throughout the year. The IDC is calculated at the mid-point of the year of commissioning.[136]

The QCA has reviewed Aurizon Network's proposal, including a financial model provided to the QCA for estimating the IDC and found Aurizon Network's IDC calculation approach to be consistent with previously applied methodology (UT4) and parameters.

The QCA's decision is that it is appropriate to approve Aurizon Network's 2017 DAU proposal to apply IDC. It is considered appropriate and meets the legitimate business interests of Aurizon Network (s. 138(2)(b)) while not imposing unreasonable costs on access seekers and access holders.

3.4 Depreciation charges

Aurizon Network's 2017 DAU proposal

Aurizon Network submitted that its methodology for calculating the return of capital (depreciation) is consistent with QCA past decisions.

The depreciation method depends on the year in which the assets were approved for inclusion into the RAB. For assets included:

- as at the approval of the 2006 Undertaking, straight-line depreciation is applied using asset lives, truncated to a maximum life of 50 years
- since the approval of the 2010 Undertaking, an accelerated depreciation profile is applied using a rolling 20-year life. This approach reflects straight line depreciation where the physical life of assets is capped at 20 years for depreciation purposes and reset at the commencement of each regulatory period.[137]

Aurizon Network's proposed depreciation amounts are as shown in Table 22.

Table 22 Aurizon Network's 2017 DAU—depreciation by system ($ million, nominal, end-of-year value)[138]

System	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*UT5 total*
Blackwater	166.1	160.1	161.7	162.2	650.1
Goonyella	115.4	114.0	116.4	109.5	455.3
Moura	13.1	13.6	14.1	14.6	55.4

[136] Aurizon Network, sub. 1: 141.
[137] Aurizon Network, sub. 1: 303.
[138] Aurizon Network, sub. 1: 303.

System	2017–18	2018–19	2019–20	2020–21	UT5 total
Newlands	11.8	13.2	14.6	16.0	55.7
GAPE	62.9	63.6	64.4	65.2	256.1
Totals	369.2	364.5	371.1	367.6	1,472.5

Note: When determining the revenue requirement, these figures are brought to mid-year values to approximate the even receipt of revenue throughout the year.

QCA analysis and decision

Summary of decision 3.4

- **The QCA's decision is to approve Aurizon Network's proposed approach to depreciation charges, including the asset lives in Appendix E.**
- **The QCA's decision depreciation amounts are calculated taking account of relevant input information (as presented in Table 23).**

In estimating the depreciation amounts for each system, the QCA considers that Aurizon Network has adopted a methodology that is appropriate to approve.

The QCA's decision for depreciation amounts is presented in Table 23, taking account of the QCA's decisions in respect of inflation and the RAB roll-forward.

Table 23 QCA decision—depreciation by system ($ million, nominal, end-of-year value)[1]

System	2017–18	2018–19	2019–20	2020–21	UT5 total
Blackwater	166.6	165.0	208.6	200.4	740.6
Goonyella	114.1	113.7	150.3	128.5	506.6
Moura	13.0	16.9	20.6	20.1	70.6
Newlands	13.1	16.9	18.3	18.8	67.0
GAPE	63.6	65.2	66.8	68.5	264.1
Totals	**370.4**	**377.6**	**464.6**	**436.3**	**1,648.9**

Note: When determining the revenue requirement, these figures are brought to mid-year values to approximate the even receipt of revenue throughout the year.

Depreciation methodology

The QRC submitted that it was willing to support the continuation of the depreciation methodology approved by the QCA in UT4.[139]

The QCA considers that the continuation of the depreciation methodology as applied in UT4 is appropriate in the interests of stability and predictability. The depreciation assumptions reflect the arrangements that existed at the time of the investments and this may have been relevant to Aurizon Network's decision-making. Further, the rolling 20-year depreciation method for new assets provides some acknowledgement of asset stranding risk as it has the effect of bringing forward the return of capital for long-life assets.

The QCA also observes that the QRC agreed with continuing the methodology and no other stakeholders commented.

[139] QRC, sub. 21: 51.

The asset lives used in the 2017 DAU for depreciation purposes are the same as used in UT4 (Appendix E). The QCA considers that the asset lives used in Aurizon Network's modelling remain appropriate.

We consider that the existing depreciation approach and the relevant asset lives remain consistent with the legitimate business interests of Aurizon Network (s. 138(2)(b)). The method also is consistent with encouraging economically efficient investment in significant infrastructure (s. 138(2)(a)) and allows Aurizon Network to price for access in a manner that is consistent with the requirements of s. 168(A)(a) of the QCA Act.

4 INFLATION FORECAST AND RAB INDEXATION

4.1 Forecasting inflation

4.1.1 Aurizon Network's 2017 DAU proposal

Aurizon Network's proposed reference tariffs and maximum allowable revenues for the UT5 pricing period were developed using an inflation forecast of 1.22 per cent, based on a break-even inflation forecasting method (break-even approach).[140]

On 13 February 2017, Aurizon Network proposed the averaging period for calculating inflation to be the 20 business days immediately prior to 1 July 2017.[141] In September 2017, Aurizon Network submitted a CEG report stating that the break-even inflation rate was 1.62 per cent for its proposed averaging period.[142]

QCA analysis and decision

Summary of decision 4.1

- **The QCA considers the appropriate way for Aurizon Network to amend its draft access undertaking is to apply a forecast inflation rate of 2.37 per cent per annum for the UT5 pricing period.**
- **For the purposes of forecasting inflation embedded in reference tariffs and maximum allowable revenues (excluding maintenance and operating cost escalation), the QCA considers that the RBA forecast approach, using a geometric mean, provides the best unbiased estimate of inflation for Aurizon Network's UT5 pricing period.**
- **The QCA proposes to use the midpoint of short-term RBA forecasts, where available, and the midpoint of the RBA target band for the years for which forecasts are not available.**

As a general principle, in the interests of stability and regulatory certainty, it is desirable that the chosen method of forecasting inflation minimises differences between forecast and actual over the regulatory period. That is, the key issue is whether the forecast inflation method provides the best unbiased estimate of the inflation rate over the regulatory period.

On the basis of available information and evidence, the QCA's decision is that Aurizon Network's proposed approach is not appropriate to approve because it does not give rise to the best

[140] Aurizon Network, sub. 1: 118–119. At June 2016, Aurizon Network observed an annualised four-year indexed CGS yield of 0.4% and a four-year nominal CGS yield of 1.62%, implying a break-even inflation of 1.22%, using the Fisher equation. This is termed the break-even rate, as it is the rate at which investors would expect the same real rate of return from either asset. The break-even method is also referred to as the break-even inflation rate, an indexed bond approach, or bond market inflation rate.

[141] QCA 2017a.

[142] Aurizon Network, sub. 33: 2. At June 2017, according to CEG, the four-year indexed yield was 0.28% and the nominal yield 1.9%, giving a break-even inflation rate of 1.62%. Aurizon Network subsequently sought to revise the averaging period and submitted an estimate of 1.80 % for the 20 days up to and including 31 January 2018 (Aurizon Network, sub. 40: 69). Aurizon Network submitted that, if its preferred approach of estimating the risk–free rate over a 10-year term were adopted, the break-even inflation would be 2.3% for the placeholder averaging period of 20 business days up to and including 31 January 2018.

estimate of forward looking inflation. The QCA considers that the RBA forecast method is appropriate to approve. Applying this method, inflation for the regulatory period is forecast by taking the geometric average of the RBA short-term forecasts for 2017–18 and 2018–19,[143] and the midpoint of the inflation target range (2.5 per cent) for 2019–20 and 2020–21.

The result is shown in the table below.

Table 24 QCA decision—inflation forecast

Source	*Forecast*
RBA forecast, June 2018[a]	2.0%
RBA forecast, June 2019[a]	2.5%
Midpoint of RBA target range, 2020	2.5%
Midpoint of RBA target range, 2021	2.5%
Geometric average for the 2017 DAU regulatory period	2.37%

Note: ***a*** *The RBA publishes a forecast range for 2018 and 2019. The midpoint of this range is used for the purpose of the QCA's forecast in each year.*

Source: RBA 2017a: 55.

While the QCA accepts that, in principle, a market-based inflation estimate can provide an unbiased estimate of inflation, in practice, a range of market distortions are likely to introduce biases into any estimate of inflation derived through market-based instruments. While these biases could, in principle, be corrected, this would require complex adjustments to the market-based estimate. The QCA notes that the RBA has stated that no measure of inflation is perfect and market-based measures of inflation expectations have several shortcomings that probably make them unviable alternatives to the RBA forecast method.[144] The QCA also notes that the RBA forecast method is simple, transparent and replicable. It is also used by other Australian regulators, including the AER.

This decision balances the interests of Aurizon Network, access seekers and access holders (ss. 138(2)(b),(e) and (h)), as it provides for the most accurate inflation forecasts for determining reference tariffs and the maximum allowable revenues for the UT5 pricing period.

The following approaches for forecasting inflation have been assessed by the QCA:

- the break-even approach, as proposed by Aurizon Network—the inflation rate at which an investor would be indifferent between investing in nominal bonds and indexed bonds of the same maturity (section 4.1.2)
- the RBA inflation target method—the midpoint (2.5 per cent) of the RBA's 2–3 per cent target band (section 4.1.3)
- the RBA forecast method—the geometric mean of the RBA short-term forecasts for the first two years combined with the RBA midpoint for the third and fourth year (section 4.1.4).

The QRC considered that the simple approach of using the RBA inflation target method should be used to maintain consistency with the previous regulatory approach and to avoid the biases

[143] The RBA's forecasts are in some cases a range. For example, the forecast for June 2018 is 1.5%–2.5%. The QCA has adopted the midpoint of the range, which for the 2018 forecast is 2.0%.
[144] RBA 2017b: 1.

inherent in Aurizon Network's proposed break-even approach.[145] The QRC also favoured the simplicity of this approach.[146]

The QCA notes that since inflation targeting commenced in 1993, the geometric average inflation rate until June 2018 was 2.49 per cent, which is close to the 2.5 per cent midpoint of the RBA inflation target band. We also note, over the long term, inflation is likely to average within the 2–3 per cent target band, and overestimates and underestimates of inflation forecasts would generally be expected to offset each other over time.

While the QCA accepts the general tenor of the arguments presented by the QRC in favour of the RBA inflation target method and agrees that the break-even approach is not appropriate for the empirical reasons outlined in this chapter, the QCA considers that using a geometric mean of the RBA's short-term forecasts, where they are available, is appropriate (rather than using the midpoint of the target band), to minimise short-term distortions where actual inflation falls outside the 2–3 per cent inflation target band. The QRC accepted this approach, although it maintained a preference for the RBA inflation target method.

In the QRC's view, the RBA forecast method avoids the shortcomings of Aurizon Network's break-even approach, including the inflation risk bias and liquidity bias.[147]

4.1.2 Break-even method

Aurizon Network proposed to use the break-even approach which calculates the difference between inflation-indexed Commonwealth Government Securities (CGS) and nominal CGS. Aurizon Network submitted that the break-even approach offers methodological advantages, as it is a probability weighted average of all possible outcomes.[148]

The QRC opposed using the break-even approach proposed by Aurizon Network. It submitted that the change in inflation forecast methodology is principally sought because of the material increase it produces in the MAR. The QRC said that Aurizon Network's views on inflation are an opportunistic attempt to increase pricing.[149]

BMA made the same observations, noting that Aurizon Network's shift from the accepted RBA estimate in favour of its own lower estimate relies less on recent assessments and decisions and more on improving cash flows when calculating annual revenues.[150]

The QRC noted that the AER considered a similar indexed bond proposal to that of Aurizon Network in regard to AusNet Services distribution network. The QRC said that the rationale for the AER's decision to reject the break-even approach and retain the RBA forecast method included:

- The method was consistent with the regulatory arrangements that have applied since 2008 (regulatory certainty).
- The midpoint of the RBA's inflation targeting band would reflect longer-term inflation expectations.

[145] QRC, sub. 21: 12–13; sub. 53: 9.
[146] QRC, sub. 53: 9.
[147] QRC, sub. 53: 9.
[148] Aurizon Network, sub. 1: 118–119.
[149] QRC, sub. 21: 12.
[150] BMA, sub. 24: 2.

- Evidence suggests that the RBA's control of official interest rates and commentary has an impact on outturn inflation and expectations.
- The method is simple, transparent and easily replicated.[151]

In response to this, Aurizon Network noted that the QCA is not bound by the National Electricity Rules (NER) and stated that a rejection by the AER of the break-even approach due to the requirements of the NER, has no implications for the QCA's determination of Aurizon Network's inflation forecast methodology.[152]

The QRC's consultant, Castalia, noted that Aurizon Network's break-even approach could potentially provide useful information that is likely to be part of the RBA's considerations in inflation forecasts.[153] That is, the relative performance of indexed and nominal bonds is an information input and is not the sole source of information in inflation forecasting.

Aurizon Network's break-even approach is based on the rationale that the nominal rate of return comprises a real rate of return and an expected inflation rate.

The QCA notes that the break-even approach assumes that nominal and indexed bonds are available with the same maturity dates, have the same liquidity, and investors are indifferent to inflation risk on nominal bonds. However, given the likely presence of bias the break-even approach is not the best unbiased estimator of inflation.

Presence of bias in the break-even approach

The assumption that investors are indifferent between nominal and indexed bonds is intuitively a difficult concept—given that indexed bonds are risk-free while nominal bonds carry some risk because the real return depends on the actual inflation rate. It is therefore reasonable to assume that a positive (or at times negative) inflation risk premium is built into the nominal bond rate. In an inflationary environment (as distinct from deflationary) this would generally result in an overestimate of inflation. Conversely, where deflation is a prevailing concern, the break-even approach may underestimate inflation. Arguably, this has recently been the case, with inflation falling to below the RBA's target 2–3 per cent band since December 2014.

This means that the inflation risk premium varies between positive and negative according to whether investors' expectations are inflationary or deflationary. Relatively volatile short-term expectations may influence the break-even bond estimates even though long-term inflation expectations are unchanged, an issue also noted by the AER.[154]

CEG also indicated that there is an unquantifiable inflation risk premium that varies according to bond investors' risk preferences.[155]

There are other potential sources of bias in the break-even approach for forecasting inflation. Indexed bonds are materially less liquid than nominal bonds on the basis that the volume of outstanding indexed bonds is lower, and the ratio of turnover to outstanding bonds is lower.[156] It is reasonable to presume that yields on indexed bonds would incorporate a premium for lower liquidity relative to nominal bonds. The indexed bond method may therefore underestimate forecast inflation.

While Aurizon Network indicated that the indexed bond market has become more liquid, the QCA observes it remains substantially less liquid than the nominal bond market and may command a liquidity premium relative to the nominal bond market.

[151] QRC, sub. 21: 13.
[152] Aurizon Network, sub. 26: 10–11.
[153] QRC, sub. 20, Annexure 1: 8–9.
[154] AER 2017c: 29–30.
[155] Aurizon Network, sub. 33: 1–2, 7–8.
[156] Devlin & Patwardhan, 2012.

The general evidence shows that the volume of indexed bonds is much lower and turnover is substantially less liquid. Based on available data for 2012–16, the average volume of nominal bonds on issue was about 12.5 times the volume of indexed bonds on issue.[157] Based on data for 2015–16, the liquidity ratio of nominal bonds was 18, compared to a liquidity ratio of 8.6 for indexed bonds.[158] From 2014–15 to 2015–16, the turnover in indexed bonds increased by 13 per cent, while the turnover in nominal bonds increased by 32 per cent.[159]

Taken together, if the effects of inflation risk bias and illiquidity bias are counter to each other, the net effect is difficult to evaluate.[160] Using Australian data over 1992–2010, Finlay and Wende (2012) estimated the net effect of the two phenomena as varying from 2.5 per cent to –1.0 per cent over both 5-year and 10-year periods.[161] However, as noted by CEG, there are issues with the accuracy of such studies and their results should be interpreted cautiously.[162] In the absence of being able to quantify these effects, the break-even approach is an unreliable estimator of forecast inflation. The AER noted that the modelling and estimation required to adjust break-even inflation estimates for the potential biases and risk premia may be complex, contentious and difficult to scrutinise. Further, their time-varying nature makes it difficult to ascertain the magnitude of the biases and risk premia at any given bond rate.[163]

Aurizon Network submitted that in assessing the break-even approach the QCA should:

- consider its reliability over a four-year term (including evidence that inflation risk premia in nominal CGS bonds with a four-year maturity are relatively small and stable)[164]
- adequately address the argument that the indexed bond market has become more liquid.[165]

These proposals are addressed below.

Reliability of the break-even approach over a four-year term

Aurizon Network noted that our conclusions regarding the break-even approach are comparable to those of the AER's recently completed review on the regulatory treatment of inflation.[166] Aurizon Network acknowledged the issues identified by the AER with respect to the reliability of using the break-even method for estimating 10-year inflation forecasts.[167] However, it submitted that the AER did not assess the materiality or existence of these biases with respect to a four-year term (given its prevailing approach to estimating the nominal risk-free rate is to use a 10-year term, for which long-term inflation forecasts are necessary). Aurizon Network argued that the conclusions from this analysis are therefore not directly relevant to our proposed use of a four-year term.[168] Aurizon Network said that, while the QCA

157 AOFM 2017.
158 AFMA 2015; 2016. The 2016 AFMR discontinued the survey-based methodology that it previously used and has implemented a 'top-down data collection process'. This has meant that turnover volumes for government bonds are significantly different compared to 2014–15, although aggregate volumes for all fixed income securities are broadly similar.
159 AFMA 2016.
160 Alternatively, if the inflation risk premium is negative, then the net effect of these two phenomena is likely to bias downward the estimate of expected inflation from the break-even method.
161 Finlay & Wende 2012.
162 Aurizon Network, sub. 33: 23.
163 AER 2017c: 30–31.
164 Aurizon Network, sub. 40: 64.
165 Aurizon Network, sub. 40: 65.
166 AER 2017f.
167 Aurizon Network, sub. 40: 63.
168 Aurizon Network, sub. 40: 63.

considered the study by Finlay and Wende (2012), which evaluated Australian data over the period of 1992–2010 for terms of five and 10 years, this data sample is not relevant to the market averaging period.[169]

Aurizon Network stated that RBA estimates of inflation risk premia in nominal bond yields across different maturities show a clearly observable difference in both the quantum and volatility of the 10-year risk premium compared to the five-year premium.[170] Aurizon Network also noted statements by NSW Treasury questioning whether any inflation risk premium in nominal bonds would be expected to be material.[171]

The QCA notes that the drawbacks applying to a break-even inflation rate estimated over a 10-year term are, in many instances, also applicable to a break-even inflation rate estimated over a four-year term.

As noted by the AER, one drawback of the break-even approach relates to the difficulty of matching the maturity of nominal and indexed bonds. Given the relatively few tenors of outstanding indexed CGS, a yield curve model is typically required for this purpose, with the consequence that break-even inflation estimates are unlikely to reflect mark-to-market expectations of inflation. Moreover, estimates tend to be sensitive to the choice of model.[172] Estimating a forecast inflation rate for a four-year term, rather than for a 10-year term, is also subject to this drawback.

This conclusion also applies to a range of other drawbacks raised by the AER, including:

- the impact of changes to the demand for, and supply of, indexed and nominal CGS that are unrelated to changes in inflation expectations
- inflation risk premia in indexed bonds arising from the impact of inflation indexation lag on the forward yields on indexed bonds
- inflation risk premia in indexed bonds arising from the potential uncertainty of post-tax real yields (and therefore pre-tax indexed bonds) due to existing tax regimes.

Moreover, we agree with the AER that attempting to correct for potential biases could introduce significant complexity to the analysis and reduce the transparency of the forecast.

Increased liquidity in the indexed bond market

Aurizon Network said that while it is true that there is a lower liquidity ratio for indexed bonds relative to nominal bonds, it is not clear why the QCA considers this to constitute evidence of a liquidity risk premium for indexed bonds.[173] Further, Aurizon Network sought clarification as to what liquidity ratio is required for a market to be liquid. Aurizon Network said beyond some point, extra trading adds nothing to market liquidity, because the true measure of market liquidity is whether a party can buy or sell a bond without moving the market price against itself.[174]

The QCA acknowledges that liquidity can be a difficult concept to define and measure.[175] As noted by Lien and Zurawski (2012), in general terms, a liquid market is one where transactions

[169] Aurizon Network, sub. 40: 63.
[170] Aurizon Network, sub. 40: 64.
[171] Aurizon Network, sub. 40: 64–65.
[172] AER 2017f: 59.
[173] Aurizon Network, sub. 40: 65.
[174] Aurizon Network, sub. 40: 65.
[175] Lien B & A Zurawski 2012.

can take place readily, with low transactions costs and little impact on price. In addition, we acknowledge that measures of liquidity are imperfect. However, liquidity ratios, as a function of turnover, are widely relied upon measures. Setting aside arguments over the best measure of liquidity, ultimately, the existence of a liquidity premium on indexed bonds is an empirical matter. Empirical investigations typically find that the premium exists and can be material at certain points in time.[176] Further, Aurizon Network's own consultant supports the existence of a premium.[177]

Aurizon Network also suggested that, even if there is evidence of a liquidity premium in indexed bonds, the QCA has not established how the existence of a liquidity premium is sufficient to impair its ability to derive an estimate of expected inflation. However, the break-even model assumes that nominal and indexed bonds have the same liquidity. Therefore, if there is any material liquidity premium, the break-even model will not produce a reliable estimate of inflation, all else equal. The QCA notes that this premium can be material and significant at certain points in time. For example, Haubrich et al (2015) estimate the premium on US indexed bonds over 1998–2011 as large—up to 1.5 per cent prior to 2004 and up to 2.0 per cent in the 2008–2010 period.

Aurizon Network further argued that the QCA's concerns about liquidity are contradictory to the conclusions in other regulatory reviews.[178] For example, Aurizon Network noted that, with respect to the two indexed bonds that would be required to interpolate a four-year yield, IPART concluded as follows:

> The real interest rates for the inflation-linked bonds maturing in 2020 and 2022 indicate a reasonably liquid market … This suggests that we could use these bonds to estimate inflation rates for 3- to 5-year periods. [179]

However, IPART also noted that the smaller amount of inflation-linked bond issuance results in data limitations and that, as a consequence, more judgement would be required to estimate inflation using the break-even model, and this would be difficult for stakeholders to replicate.[180]

Aligning with a 10 year term for the risk free rate

Aurizon Network stated that, were we to adopt its preferred approach of estimating the risk-free rate over a 10-year term, then an appropriate approach to estimating inflation would be to take an equally weighted average of the four-year break-even inflation rate, the four-year inflation swap rate and the four-year rate from the RBA forecast method (for the first four years) and the midpoint of the RBA inflation target for years five to 10. This was on the basis that coupling short term forecasts with a longer term risk-free rate would be expected to balance potential biases, associated with any individual forecast, over the long term.[181]

Aurizon Network emphasised that, for the avoidance of doubt, this method is only appropriate to use if the term for the risk-free rate exceeds the regulatory term.[182]

[176] See D'Amico et al (2010), Grishchenko and Huang (2012) and Haubrich et al (2012).
[177] In its previous report on the market risk premium, Frontier stated that the 'correction' that the QCA applies to the Ibbotson estimate, when applying its Siegel approach, is likely to be overstated as it fails to account for likely illiquidity premia within the yields on inflation-protected bonds (Aurizon Network, sub. 9: 29).
[178] Aurizon Network, sub. 40: 65.
[179] Aurizon Network, sub. 40: 65.
[180] IPART 2018: 108.
[181] Aurizon Network, sub. 40: 70.
[182] Aurizon Network, sub. 40: 70.

Aurizon Network's proposed forecast inflation, under this method, is outlined in the table below.

Table 25 Aurizon Network's construction of 10-year inflation forecasts for June 2017 and January 2018 placeholder averaging periods

	Weighting	*June 2017*	*January 2018*
Four-year break-even rate	0.33	1.62%	1.80%
Four-year inflation swaps	0.33	1.91%	2.10%
Four-year inflation forecasts	0.33	2.06%	2.19%
Average four-year inflation rate		1.84%[a]	2.01%
Inflation forecasts year 5–10		2.50%	2.50%
Ten-year inflation forecast		2.24%	2.30%[b]

Notes: (a) Aurizon Network's proposed indexation for operating and maintenance costs. (b) Aurizon Network's proposed indexation for the asset base.

The QCA does not consider that averaging a range of short-term forecasts (including the break-even approach) that contain bias will necessarily provide for the best unbiased forecast of inflation for the reasons noted in this decision.[183]

Adjusting for bias in nominal yields

In September 2017, Aurizon Network provided an updated report by CEG.[184] CEG proposed that the role of regulatory inflation should be to remove from the nominal cost of capital the compensation for inflation exposure that is already embedded in the nominal cost of capital. This delivers the real rate of return required by investors in an inflation-protected regulatory regime. CEG said that nominal bond investors have strong incentives to buy/sell at yields that provide accurate compensation for expected inflation.[185]

CEG suggested that it is possible that bond market investors demand compensation for inflation that is higher/lower than the best forecast available to the regulator. The existence of a positive/negative inflation risk premium in the nominal bond yield could mean that, for example, investors require 1.5 per cent compensation for inflation even though actual inflation is more likely to be 2.5 per cent. CEG said that the 1.5 per cent forecast should be the amount removed to arrive at the real cost of capital.[186]

CEG concluded that if nominal bonds have low real yields because investors like exposure to inflation risk, then any inflation risk premium must be taken into account and removed from Aurizon Network's cost of capital. CEG commented that because Aurizon Network's investors do not bear inflation risk associated with a fixed nominal rate of return, it would be an error to compensate those investors as if they were exposed to positive or negative inflation risk. CEG

[183] The QCA considered Aurizon Network's suggestion that the QCA examine the possibility of referencing inflation swaps (Aurizon Network, sub. 40: 63). In doing so, the QCA notes that for such a contract, both parties are exposed to inflation risk and therefore the fixed price of the contract is not an unbiased estimator of expected inflation. Using such contracts would then potentially result in a material bias in the estimate of expected inflation. The AER recently reached the same conclusion (AER 2017f: 55–57).

[184] Aurizon Network, sub. 33: 7.

[185] Aurizon Network, sub. 33: 9.

[186] Aurizon Network, sub. 33: 10.

said that the bond market inflation method automatically deals with the problems associated with inflation risk premia.[187]

CEG noted that the bond market inflation rate is lower than the RBA midpoint of ranges approach previously used by the QCA, and that this could be due to either one or a combination of the following:

- Investors expect inflation consistent with the RBA range but are happy to earn less than this in compensation for expected inflation because they value being exposed to inflation risk. That is, they are happy with a guaranteed nominal return rather than a real return.
- Investors do not expect inflation to be in the midpoint of the RBA forecast/target range.[188]

CEG concluded that given the large gap between bond market inflation estimates and the midpoint of RBA forecast/target ranges estimate, the latter is overestimating inflation expected by bond market investors. However, even if the RBA method is accurate, CEG said it should not be used as regulatory inflation, as inflation exposure for nominal assets is highly valued by investors, to a value of an estimated 76 basis points.[189]

CEG also suggested that even if inflation expectations are in line with RBA forecasts/targets, and the break-even approach gives a lower inflation forecast, then the latter is the rate that is embedded in the nominal risk-free rate and that should be used for the inflation gain deduction from revenues.[190]

CEG's proposal was on the basis that the QCA continues to provide for inflation-protected returns and does not offer nominal returns.[191]

Notwithstanding this, the inherent and unquantifiable biases associated with the break-even approach as noted above are not well enough understood to provide confidence that the break-even approach is appropriate, irrespective of the extent of any inflation risk premium built into the nominal bond rate. Furthermore, as noted above, the inflation risk premium would be expected to be volatile in response to short-term variations in investors' risk appetites and would not truly reflect long-term inflation expectations; it is therefore not consistent with the requirement for an unbiased forecast of inflation over the four-year regulatory period.

The QCA therefore does not consider that it is appropriate to remove the inflation risk premium from the cost of capital, as this would result in a biased estimate.

Aurizon Network also suggested that if the QCA considers there are biases in the nominal CGS yield, then that yield is a biased proxy for the risk-free rate in the QCA's WACC. For instance, the QCA previously indicated that a negative real risk-free rate (implied by the break-even approach) was due to a negative inflation risk premium on nominal bonds. However, Aurizon Network said that the QCA has ignored the related implication that the nominal bond yield would therefore be biased downward. Accordingly, the QCA should adjust the risk-free rate upward for this bias.[192]

We do not accept Aurizon Network's arguments for an adjustment to the risk-free rate in these circumstances. If an access provider is risk-free in nominal terms, then the appropriate cost of

[187] Aurizon Network, sub. 33: 4, 14.
[188] Aurizon Network, sub. 33: 3.
[189] Aurizon Network, sub. 33: 30.
[190] Aurizon Network, sub. 33: 30.
[191] Aurizon Network, sub. 33: 3.
[192] Aurizon Network, sub. 1: 119.

capital is the nominal risk-free rate. The factors that determine that risk-free rate are not relevant to this conclusion. For this reason, we do not accept there is a case to make an upward adjustment to the risk-free rate to reflect an inflation risk premium that is negative.

4.1.3 The RBA inflation target method

The QRC proposed that the midpoint of the inflation target band (the 2.5 per cent midpoint) be used to forecast inflation. In favour of this approach, the QRC noted:[193]

- Since inflation targeting started in 1993, the annualised inflation rate has been marginally higher at 2.6 per cent than the midpoint of the RBA's inflation target range of 2.5 per cent.
- A long-term and stable approach to inflation (free of bias, uncertainty and potential for disputes) is more appropriate, given the commercial context of pricing for long-life infrastructure.
- A change in the methodology for forecasting inflation that is known to produce a low inflation result and materially increase charges to users is contrary to the objective of regulatory certainty.

The QRC noted that a choice exists between inflation forecasts based on a contemporaneous forecast revised for each regulatory period and a constant long-run measure of inflation across multiple regulatory periods. The QRC considered that a long-term inflation forecast is effectively a cash flow deferment factor—enabling stable and predictable cash flows.[194]

However, Aurizon Network noted that the break-even approach would provide more stable cash flows than the long-term forecast of 2.5 per cent. That is, when the risk-free rate is high, break-even inflation is likely to be high. The higher return on capital would be offset by the inflationary gain deduction, thereby smoothing reference tariffs over time.[195]

4.1.4 The RBA forecast method

The QCA considers that RBA forecasts provide materially better forecasts of actual inflation, exhibiting a lower root mean square error (RMSE)[196], and that they remain simple, transparent and replicable. For example, Tulip and Wallace report that the RMSE of the RBA’s forecasts are materially superior to the use of the inflation target (and statistically significant) for one year ahead (0.89 per cent versus 1.41 per cent), and marginally superior (but not statistically significant) for the second year ahead (1.27 per cent versus 1.36 per cent).[197] Tulip and Wallace also report that the RMSE of the RBA’s forecasts are marginally superior to those provided by other private sector forecasters (but the differences are not statistically significant).

The empirical evidence suggests that the best forecast over the next four years would be the RBA’s short-term forecast for the first year coupled with the inflation target for the remaining three years.[198] We note Lally concluded that the RBA forecast approach used by the QCA for the

[193] QRC, sub. 21: 10–14.
[194] QRC, sub. 21: 13.
[195] Aurizon Network, sub. 26: 10.
[196] The RMSE measures the difference between estimated and observed data points; it is derived as the average of the squared errors. A lower RMSE implies a better estimator.
[197] Tulip & Wallace 2012.
[198] CFC 2017a.

DBCTM final decision (using RBA short-term forecasts for beyond the first year where available) is 'close to optimal'.[199]

CEG considered that there is no reason to believe that the probability weighted average of all possible inflation outcomes falls in the middle of the RBA forecast and target ranges. CEG said that the RBA's use of wide forecast ranges implies a level of uncertainty, and that the top and bottom of the ranges move only in 0.25 per cent increments. CEG agreed that it might be reasonable to make the assumption that inflation outcomes fall in the middle of the RBA ranges over a long period (20 years or longer), but over a shorter period it is irrational for investors to assume this would always occur.[200]

The QCA's analysis (section 4.2) indicates that since the commencement of the 2006 Undertaking, the average inflation rate has been close to the midpoint of the RBA's 2–3 per cent target band. The QCA agrees that this is only achieved over the long run and may not be achieved within one regulatory period. However, by using RBA forecasts for the first two years of the regulatory period, the forecast average takes account of short-term expectations driven by economic conditions and therefore should provide a better forecast.

Aurizon Network also noted (Table 26) that the RBA forecast/target method implies that bond investors are expecting inflation of 2.37 per cent, which implies a real return on bonds of –0.46 per cent. Aurizon Network suggested that this outcome was not reasonable given that the same investor could buy an inflation-protected government bond and earn a positive return and also given other regulatory decisions.[201]

Table 26 Comparison of draft decision to ERA approach with term matching[202]

	Draft decision with RBA average	*Draft decision with break-even inflation*	*ERA decision on DBP using break-even inflation*
4-year break-even inflation rate		1.62%	1.43%
QCA RBA forecast	2.37%		
Nominal 4-year risk-free rate	1.90%	1.90%	1.80%
Real risk-free rate	(0.46%)	0.28%	0.36%

Note: Real rates are obtained from (1+n)/(1+inf) – 1.

The QCA does not agree with Aurizon Network's analysis, as it relies on the break-even approach to estimate a real return. To illustrate the potential problems with this approach, suppose there is an inflation risk premium of –0.45 per cent on nominal bonds and an illiquidity premium of 0.5 per cent on indexed bonds (we note this data is consistent with the estimates from Australian data, as discussed previously).[203] Taking these premia into account gives a real rate of return of 0.48 per cent. In contrast, the break-even approach incorrectly ignores both premia and implies a real rate of return of –0.46 per cent.

Given the shortcomings of the break-even approach, the QCA considers that it is not appropriate to approve Aurizon Network's proposal and that the RBA forecast approach is

[199] CFC 2017a.
[200] Aurizon Network, sub. 33: 17–18.
[201] Aurizon Network, sub. 40: 64; sub. 43.
[202] Table reproduced from Aurizon Network, sub. 40: 64.
[203] Finlay & Wende 2012.

appropriate. It is more observable and transparent and, as noted by the AER, does not respond to short-term surprises in inflation outcomes. While inflation targeting by the RBA remains effective, the RBA forecast method provides the best unbiased estimator of inflation.[204]

Aurizon Network considered that, for the NPV=0 principle to be satisfied from the perspective of an equity investor, the real risk-free rate must reflect market expectations of inflation inherent in the nominal risk-free rate. Aurizon Network argued that, if an equity investor expects to earn a real rate of return, then the use of a market-based parameter for the nominal risk-free rate must be matched with a market-based parameter for inflation.[205]

In support of this claim, Aurizon Network pointed to comments by NSW Treasury, in the context of the cost of debt, where NSW Treasury stated that, in contrast to RBA forecasts, break-even inflation forecasts ensure consistency between real and nominal yields as they reflect current market expectations which feed directly into the price of debt at the time of the measurement. NSW Treasury further noted that the use of break-even inflation forecasts would remove any over (under) compensation where inflation expectations remain persistently above (below) the midpoint of the RBA target band.

Aurizon Network noted that the concern regarding potential under or over compensation was demonstrated in IPART's analysis of the difference between actual CPI and inflation estimates produced by the break-even and RBA forecast approaches over the 2010–12 period. That analysis showed that, over a three-year period, the break-even inflation method produced lower forecast errors but the differences were comparable at five years.[206]

While Aurizon Network accepted the argument that long term inflation expectations are anchored within the RBA's inflation target band and near the midpoint, it argued that this does not ensure that the RBA forecasts are an unbiased estimator of inflation with respect to the (20-day) averaging period.[207] Aurizon Network submitted that if the QCA is to maintain a short-term risk-free rate (20-day averaging period), then it must ensure that RBA forecasts are also reliable over the short term.[208] Aurizon Network considered that, on balance, the RBA method cannot be coupled with a short-term averaging period in a low interest rate and deflationary environment and produce unbiased estimates of inflation.[209]

While we accept that, in principle, a market-based inflation estimate can provide an unbiased estimate of inflation, in practice, a range of market distortions are likely to introduce biases into any estimate of inflation derived through market-based instruments. While these biases could, in principle, be corrected, this would require complex adjustments to the market-based estimate. We note that the RBA itself in July 2017, in response to a letter from the AER in the context of the AER's review of the regulatory treatment of inflation, stated that:

> To summarise our response, none of these measures is perfect … As noted in previous correspondence between the Bank and the AER, market-based measures of inflation expectations have several shortcomings that probably make them unviable alternatives to the current method.[210]

[204] AER 2017c: 24.
[205] Aurizon Network, sub. 40: 66.
[206] Aurizon Network, sub. 40: 66.
[207] IPART 2018: 108.
[208] Aurizon Network, sub. 40: 67.
[209] Aurizon Network, sub. 40: 68.
[210] RBA 2017b: 1.

In contrast, the RBA forecast method is simple, transparent and replicable. It also has the advantage of providing materially better forecasts of actual inflation exhibiting a lower mean square error. Using the best unbiased method to forecast inflation appropriately balances the interests of Aurizon Network and stakeholders, as it will minimise the risk of over/under compensation of Aurizon Network, thereby encouraging efficient use and investment in the network in furtherance of the object of Part 5 of the QCA Act.

4.2 Indexation of the asset base for pricing and roll-forward purposes

4.2.1 Aurizon Network's 2017 DAU proposal

Aurizon Network proposed to apply the forecast rate of inflation used for the development of reference tariffs for the purposes of determining indexation when applying the RAB roll-forward principles (see Schedule E, cl. 1.1.1(a)).[211]

QCA analysis and decision

Summary of decision 4.2

- **The QCA considers the appropriate way for Aurizon Network to amend the 2017 DAU is to index the RAB using actual inflation for the roll-forward process while using forecast inflation to develop reference tariffs and maximum allowable revenues.**
- **The QCA does not consider it appropriate to revise forecast inflation during the regulatory period or include an inflation accrual account as part of the RAB roll-forward process.**

The QCA indexes the RAB to ensure that the value of the RAB is maintained, in real terms, over time. As the return on capital component of allowable revenues is determined in nominal terms, using a nominal WACC, we deduct inflationary gain on the RAB from allowable revenues to avoid double counting of inflation.

[211] In March 2018, Aurizon Network submitted that the forecast inflation rate should be used to develop reference tariffs but that the RAB should be indexed with actual inflation when applying the RAB roll-forward principles (Aurizon Network, sub. 40: 73).

Possible RAB-MAR indexation approaches

Since the forecast of expected inflation is an unbiased estimator of the actual inflation rate, the expectation of the revenue deduction equals the expectation of the RAB adjustment. As a result, each of the approaches identified below could be reasonable.

The three approaches are:

- Forecast–Forecast – as initially proposed by Aurizon Network, this method uses forecast inflation to determine reference tariffs (revenues) and for the purposes of indexing the RAB. By providing a target nominal rate of return, it conceptually aligns with the fixed nominal debt contracted by Aurizon Network.[212]
- Forecast–Actual—using forecast inflation to determine reference tariffs (revenues) but applying actual inflation for the purposes of indexation of the RAB. This approach has been approved by the QCA in recent regulatory decisions, including Aurizon Network's 2016 Undertaking.
- Actual–Actual—effectively applying actual inflation to both reference tariffs (revenues) and indexation of the RAB by use of a true-up adjustment at the end of the period. This could be achieved by an *ex post* adjustment to reflect the difference between the actual inflation rate and the forecast rate

Aurizon Network's 2017 DAU proposed a Forecast–Forecast approach as it considered that the Forecast–Actual approach delivers a real cost of capital and that this was problematic because debt is usually contracted in nominal terms and, therefore, the Forecast–Actual approach was not appropriate from a debt investor perspective.[213]

However, in March 2018, Aurizon Network proposed a Forecast-Actual approach stating that it:

> … considers that it is appropriate for an initial real rate of return to be the target [and] that this is consistent with the promotion of economically efficient investment in the CQCN (as investors expect to be compensated for inflation).[214]

Aurizon Network proposed to pair the Forecast–Actual approach with the break-even approach stating that:

> [t]he forecast-actual approach using a four year risk free rate and the RBA inflation forecasts is contrary to Aurizon Network's legitimate business interests and is inconsistent with ensuring prices are commensurate with the efficient financing costs of providing the service.[215]
>
> … the forecast–actual approach should only be applicable in circumstances where:
>
> - a long-term nominal risk free rate is matched with long-term inflation expectations
> - a term matched nominal risk free rate is matched with the BEI.[216]

On this basis Aurizon Network said that it proposed to:

> … incorporate a forecast-actual approach to inflation that is:
>
> - based on the 10 year risk free rate
> - uses a forecast for inflation which is the best (composite or discrete) unbiased inflation expectation prevailing at that time …
> - includes adjustment for updated inflation information in the annual price review processes
> - rolls forward the [RAB] to reflect actual inflation outcomes.[217]

[212] Aurizon Network, sub. 1: 115.
[213] Aurizon Network, sub. 1: 115.
[214] Aurizon Network, sub. 40: 73.
[215] Aurizon Network, sub. 40: 73.
[216] Aurizon Network, sub. 40: 75.

Aurizon Network proposed to include the following adjustment processes:

- an intra period adjustment process to revise the RAB and annual allowable revenues with updated inflation information
- an end-of-period adjustment, utilising an inflation accrual account, to recover (return) any remaining revenue shortfall (over recovery) arising from differences between the applied inflation forecasts and actual inflation.[218]

On the basis of available information and evidence, the QCA's decision is to not approve Aurizon Network's 2017 DAU proposal. In the absence of a proposal from Aurizon Network that the QCA can accept, the QCA considers that it is appropriate to maintain the current Forecast–Actual approach with the RBA inflation forecasting method.

As Aurizon Network is no longer proposing a Forecast–Forecast approach, the QCA has not given further consideration to the merits of the Forecast–Forecast approach.

Under Aurizon Network's revised proposal, a composite inflation rate (estimated using a range of short-term forecasts including the break-even inflation rate), would be used to forecast revenues[219] and the RAB would be rolled forward using actual inflation.[220]

The QCA does not consider using the break-even approach as submitted by Aurizon Network provides the best unbiased estimate of inflation (as discussed in section 4.1). As such the QCA is unable to approve Aurizon Network's March 2018 submission as the package presented.

Aurizon said that its proposed adjustments to revenues for updated inflation information were the most administratively efficient way to ensure that it earns a real return on its investments over their economic life and prices and revenues in each year of the regulatory period are maintained in real terms as close as reasonably practical.[221]

The QCA considers that using the best unbiased forecast of the inflation rate is appropriate under the existing Forecast–Actual approach. While actual inflation may not exactly match its forecast and may lead to short-term deviations between actual and expected inflation rates, applying the best unbiased estimator of inflation (that is, the expected inflation rate using the RBA forecast method) should lead to an estimate that aligns more closely with actual inflation on average.

This decision balances the interests of Aurizon Network, access seekers and access holders (ss. 138(2)(b),(e) and (h)) as it maintains the RAB in real terms given our use of an unbiased forecast inflation rate.

The QCA notes that stakeholders did not favour Aurizon Network's 2017 DAU proposed Forecast–Forecast approach and preferred the prevailing Forecast–Actual approach to be maintained.

The QRC submitted that it supported the continued application of the Forecast–Actual approach as applied to Aurizon Network's previous access undertakings. The QRC noted that the use of the best available estimate of inflation for forecasting purposes should ensure that variations

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[217] Aurizon Network, sub. 40: 73.
[218] Aurizon Network, sub. 40: 76–77.
[219] Aurizon Network considered the use of a break-even approach estimated over a 10-year term to be necessary to ensure that the long-term nominal risk free rate is matched with long term inflation expectations.
[220] Aurizon Network, sub. 40: 73.
[221] Aurizon Network, sub. 40: 76.

between forecast and actual inflation are not significant, and are offset over time. Therefore, the Forecast–Actual approach will satisfy the NPV=0 principle. It also has the advantage of maintaining the real value of the RAB over time.[222] Pacific National raised concerns that moving to a Forecast–Forecast approach could artificially inflate, or deflate, the RAB if the inflation forecast was substantially inaccurate.[223]

[222] QRC, sub. 53: 9.
[223] Pacific National, sub. 61: 20.

5 RATE OF RETURN

5.1 Aurizon Network's 2017 DAU proposal

Aurizon Network's proposed reference tariffs and allowable revenues are based on a proposed post-tax nominal (vanilla) WACC of 6.78 per cent, comprising:

- return on equity of 9.13 per cent
- return on debt of 4.86 per cent
- capital structure of 55 per cent debt (45 per cent equity)
- gamma of 0.25.[224]

'Approved WACC' is also a defined term in Aurizon Network's 2017 DAU.

5.2 Key issues identified during the QCA's investigation

The QCA has considered all elements of Aurizon Network's proposed WACC in making this decision. The following issues attracted comment from stakeholders or have been identified for further consideration:

- Aurizon Network's UT5 WACC (section 5.3)
- Implications associated with the proposed averaging period (section 5.4)
- Comparisons to other regulatory decisions (section 5.5)
- Reasonable ranges of individual WACC parameters (section 5.6)
- Incentives to invest (section 5.7).

[224] Aurizon Network, sub. 1: 246.

5.3 Aurizon Network's UT5 WACC

Summary of decision 5.1

- **The QCA considers the appropriate way for Aurizon Network to amend its draft access undertaking is to revise its proposed allowable revenues and reference tariffs, based on a WACC of 5.7% comprising:**
  - **(a) a return on equity of 7.26%**
  - **(b) a return on debt of 4.42%**
  - **(c) capital structure of 55% debt (45% equity)**
  - **(d) gamma of 0.484.[225]**
- **The QCA also requires consequential amendments to the definition of 'Approved WACC' to reflect this decision.**

The QCA considers that Aurizon Network's 2017 DAU WACC proposal, and its subsequent March 2018 revised estimate, are not appropriate to approve having regard to the s. 138(2) factors.[226] The QCA's reasoning is provided in this decision, including Appendix F.

The QCA considers a rate of return of 5.7 per cent is appropriate to approve for Aurizon Network's UT5 pricing period, represented as:

- a return on equity of 7.26 per cent
- a return on debt of 4.42 per cent
- capital structure of 55 per cent debt (45 per cent equity)
- gamma of 0.48.

The QCA has considered all submissions and expert reports submitted to it in relation to the WACC; further consideration is set out in Appendix F. In making this decision, the QCA has assessed the appropriate WACC for the UT5 pricing period, relying on both a bottom-up WACC assessment of individual parameters and assessing the overall reasonableness of the resulting WACC.

The QCA considers that the bottom-up WACC assessment of individual parameters of 5.45% provides a starting point to consider Aurizon Network's proposal.[227] The QCA's detailed bottom-up assessment of individual WACC parameters provides a framework for estimating a rate of return for Aurizon Network, including accounting for the regulatory and commercial risks involved.

However, ultimately the QCA must give consideration as to whether the overall WACC is appropriate to approve, having regard to the factors in s. 138(2) of the QCA Act. The QCA

[225] These figures have been rounded for presentational purposes. The QCA's decision provides for an overall WACC that is around 25 basis points higher than a bottom-up WACC assessment of individual parameter estimates. This increase has been distributed between the return on debt and equity (based on Aurizon Network's benchmark gearing level) for modelling/pricing purposes.

[226] Aurizon Network proposed a rate of return of 6.78% as part of its 2017 DAU proposal and subsequently submitted for a rate of return of 7.03% in March 2018.

[227] The bottom-up WACC assessment of each parameter estimate provides a post-tax nominal (vanilla) WACC estimate of 5.45%. The bottom-up WACC assessment and consideration of individual parameters is presented in the WACC Appendix F.

considers that simply applying a mechanistic approach to a bottom-up WACC estimate will not necessarily ensure an appropriate overall WACC for the provision of access to the CQCN.

While the bottom-up WACC assessment provides a means for assessing an appropriate rate of return for Aurizon Network, the QCA's consideration of an appropriate WACC requires judgement to be applied. In considering whether the overall WACC is appropriate to approve, amongst other things, the QCA has taken into consideration the:

- risk of Aurizon Network's legitimate business interests not being satisfied, arising from an estimate of Aurizon Network's WACC using the bottom-up assessment for the proposed averaging period;
- asymmetric consequences of setting a WACC that is not commensurate with Aurizon Network's commercial and regulatory risks; and
- uncertainty inherent in estimating a WACC for the provision of access to the CQCN.

In light of these considerations, and noting concerns raised with applying the QCA's bottom-up WACC assessment for the proposed averaging period, the QCA considers there is merit in considering alternative time-variant parameter estimates. The QCA has exercised judgement with reference to the QCA's bottom-up WACC assessment and given consideration to alternative approaches adopted by other Australian regulators, specifically:

- a 10-year bond term (and not a term-matched bond) to estimate the risk-free rate, which provides for a WACC of around 5.75 per cent;[228] and
- an average of the interpolated RBA and Bloomberg estimates of the 10-year BBB debt risk premium for the proposed averaging period, which provides for a WACC of around 5.57 per cent.

The QCA notes that a WACC of 5.7 per cent is within the range of estimates derived from adopting either of these approaches.

The QCA considers that these alternative approaches provide guidance on the extent to which judgement be applied beyond the QCA's bottom-up WACC assessment, noting the risk of Aurizon Network's legitimate business interests not being satisfied associated with adopting the QCA's bottom-up assessment for the UT5 averaging period. Moreover, the QCA's decision recognises the asymmetric consequences of setting a WACC that is not commensurate with Aurizon Network's commercial and regulatory risks.

The QCA considers that a WACC of 5.7 per cent accounts for risk associated with determining Aurizon Network's rate of return for the proposed averaging period (section 5.4). Thus, the QCA considers that a WACC of 5.7 per cent provides a rate of return for Aurizon Network that satisfies Aurizon Network's legitimate business interests (s. 138(2)(b)) and Aurizon Network's commercial and regulatory risks (s. 168A(a)).

By way of comparison, a WACC of 5.7 per cent is similar to, and in many cases higher than, the normalised WACCs of recent regulatory decisions for other infrastructure networks in Australia (section 5.5).

[228] Based on a 10-year risk-free rate of 2.44%, MRP of 6.5% and no interest rate swap costs. Note that adopting a 10-year bond term would also have additional implications for estimating the rate of forecast inflation, with corresponding impacts on indexation of the RAB and allowable revenues.

Alternative approaches for estimating the risk-free rate and debt risk premium

The QCA notes that alternative approaches for estimating the risk-free rate and debt risk premium are applied by the ACCC[229] and AER.[230] If either of these approaches was adopted by the QCA to estimate Aurizon Network's WACC, it would have implications for the overall WACC estimate obtained from the QCA's bottom-up WACC assessment.

- The ACCC and AER estimate a risk-free rate using 10-year Commonwealth government securities sourced from the RBA for the averaging period. The QCA notes that applying a 10-year risk-free rate would also affect other parameter estimates, such as the MRP and interest rate swap costs, as well as estimating forecast inflation.

  Applying a 10-year bond term to estimate the risk-free rate results in a WACC of around 5.75%, based on a ten-year risk-free rate of 2.44%, a MRP of 6.5% and no interest rate swap costs.
- In estimating the debt risk premium for a BBB+ benchmark entity, the ACCC and AER adopt a BBB-rated bond with a 10-year target tenor as the benchmark bond and use an independent third party data service provider to estimate the return on debt for the averaging period. The AER has previously acknowledged that, to the extent that the estimates produced reflect those lower rated bonds included in the sample (BBB and BBB-), it is more likely to overstate the DRP estimate.

  An average of the interpolated RBA and Bloomberg estimates of the 10-year BBB debt risk premium for the proposed averaging period results in a WACC of around 5.57%, all other things being equal.

The QCA's draft decision proposed a rate of return of 5.41 per cent, based on a bottom-up WACC assessment of individual parameters. However, we acknowledge that care must be taken with the simple incorporation of individual parameter estimates. Some stakeholders raised concerns in relation to the overall rate of return obtained from a bottom-up WACC estimate of individual parameters (see box below).

The QCA's bottom-up WACC assessment of individual parameters provides a WACC estimate that, although not an outlier, per se, is lower than regulatory decisions for comparable entities, after being normalised for timing differences (section 5.5).

In making this decision on an appropriate WACC for Aurizon Network's UT5 pricing period, the QCA has not bound itself to previous market parameter decisions where we consider past decisions are no longer providing appropriate regulatory outcomes for Aurizon Network and/or access seekers/holders.

Having regard to the considerations above, and after weighing up the criteria in s. 138(2) of the QCA Act, the QCA considers that Aurizon Network's proposed WACC of 6.78 per cent is not appropriate to approve, and that a rate of return of 5.7 per cent is appropriate. The QCA considers that a WACC of:

- 6.78 per cent is excessive and unable to be justified as being commensurate with the commercial and regulatory risks involved with providing access to the CQCN. The QCA considers that a WACC of 6.78 per cent is not in the interests of access seekers or access holders.
- 5.7 per cent sufficiently accounts for the commercial and regulatory risks in providing access to the CQCN, while balancing the legitimate business interests of Aurizon Network, the interests of access seekers/holders and the public interest.

This decision has been made with consideration of Aurizon Network's incentives to invest, maintain and operate the CQCN in a manner sought by its customers. In this regard, the QCA considers that a rate of return of 5.7 per cent, which is above the QCA's detailed bottom-up

[229] ACCC 2017.
[230] AER 2013b.

assessment of individual WACC parameters, is consistent with the object of Part 5 of the Act (ss. 138(2)(a) and 69E). Overall, the QCA's decision also addresses the argument from Aurizon Network and others that the overall rate of return will in some way contribute to, or cause, Aurizon Network to undertake operational decisions that adversely impact on network reliability or utilisation, or are otherwise to the detriment of the CQCN supply chain.

Stakeholder submissions in relation to the overall rate of return

Aurizon Network submitted that it had concerns with various aspects of the QCA's approach and did not agree with the proposed rate of return calculation underpinning the proposed rate of return.

Aurizon Network did not consider that the QCA's WACC methodology satisfied the statutory requirement that the price for access generates expected revenue that is at least enough to meet the efficient costs of providing access to the service, and a return on investment commensurate with the regulatory and commercial risks involved.[231]

Aurizon Network did not consider that regard had been given to Aurizon Network's legitimate business interests and the interests of access seekers. As such, Aurizon Network considered that a balanced assessment of the overall rate of return having regard to the criteria in s. 138(2) of the QCA Act had not been undertaken.[232]

Amongst other things, Aurizon Network submitted:[233]

- It is essential that there is a testing or sense-check taken of the overall reasonableness of a particular WACC figure that has been calculated by reference to point estimates drawn from the estimation of WACC parameters that often give rise to a reasonable range of outcomes.
- The QCA's WACC methodology makes it substantially difficult for Aurizon Network to attract investors, in an environment where investment in the coal industry is becoming more difficult. The QCA needs to consider that, in competitive debt and equity markets, whether the rate of return of will promote economically efficient investment in the CQCN.
- The QCA's WACC methodology does not compare favourably to those regulated essential services for which Aurizon Network has been compared.
- The QCA's WACC methodology is an outlier when compared with other regulatory decisions. Given the CQCN operates in a competitive market for attracting investment funds, a consistent approach is important to ensure a proper allocation of capital occurs and capital distortion is minimised.
- Adverse financial outcomes associated with the QCA's building block modelling dampen Aurizon Network's post-tax return on equity.
- The QCA's WACC methodology creates an environment that would materially reduce Aurizon Network's willingness to invest in the CQCN.
- The consequences of undercompensating in the regulatory WACC is to raise the costs of access of one access seeker relative to its competitors.

In contrast, the QRC and Anglo American submitted that the rate of return obtained from the QCA's bottom-up individual parameter estimates is commensurate with the regulatory and commercial risks faced by Aurizon Network.

The QRC considered that the QCA (and other regulators) have developed a well understood and regularly applied set of tools to analyse those risks. Furthermore, the corresponding WACC estimate reflected a:

- thorough consideration of the relevant issues and evidence relevant to estimating the rate of return; and
- considered exercise of judgement by the QCA.[234]

In making this decision, the QCA has examined the overall WACC outcomes achieved from alternative approaches/methodologies adopted in other Australian regulatory decisions with relevant comparators (see section 5.4). In doing so, the QCA considers that there is merit in

[231] Specifically, Aurizon Network did not accept that the QCA has estimated a rate of return that is sufficient to compensate investors for Aurizon Network's exposure to systematic risk.
[232] Aurizon Network, sub. 40: 30.
[233] Aurizon Network, sub. 40: 13, 30–31, 83–85, 87–88.
[234] QRC, sub. 53: 13, 22; Anglo American, sub. 57: 3.

considering the benefits of a simpler and consistent approach to WACC methodologies as it applies to the economic regulation of services provided by significant infrastructure across Australia.[235] The QCA is open to considering reasonable, alternative approaches for calculating WACC. The key consideration for the QCA is that the overall rate of return is appropriate to approve. The QCA's assessment and consideration of individual WACC parameters is provided in Appendix F.

5.4 Implications associated with the proposed averaging period

Aurizon Network raised concerns about the 'on-the-day' approach to estimating time-variant parameters for its proposed averaging period. In particular, Aurizon Network submitted that the on-the-day approach involves significantly greater financing risks than the trailing average approach. Aurizon Network noted the AER's recent position of moving to the trailing average debt portfolio as it better aligned the regulatory debt allowance with incurred debt costs, and so reduced both interest rate risk and refinancing risk.[236]

Additionally, Aurizon Network submitted that the proposed averaging period does not provide a good indication of the market conditions likely to be experienced over the regulatory period.[237]

Aurizon Network submitted that the 'lock-in' of WACC parameters for each regulatory period can exacerbate the potentially adverse timing impact of regulatory determinations. Aurizon Network did not consider that the current on-the-day approach to estimate the risk-free rate and term-matching for estimating the cost of equity produces efficient outcomes for customers, the regulated business or investors in regulated infrastructure who take a long-term perspective. Aurizon Network said that taking a long-term perspective on Aurizon Network's systematic risks should result in a relatively stable WACC over time, not one that reflects the timing of regulatory determinations.[238]

The QCA is open to considering alternative regulatory benchmarking debt management approaches (for example a trailing average approach) in future assessments. The QCA notes that throughout the QCA's investigation, Aurizon Network proposed a forward looking, on-the-day approach for setting the time-variant WACC parameters for UT5 pricing period. Aurizon Network has not proposed to estimate the cost of debt using an alternative approach—nor has Aurizon Network provided evidence that it is able to match (or has been matching) a trailing average debt management strategy in order to address this risk.

The rationale for adopting the on-the-day approach is that the time-variant WACC parameters should reflect prevailing market conditions—taking account of the latest market information and investor expectations—to provide the current benchmark for those parameters at the start of the regulatory pricing period. The QCA considers that a forward-looking rate of return provides appropriate signals for new investment. Furthermore, it is also designed to provide an appropriate and manageable benchmark to enable the regulated firm to manage its debt efficiently.

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[235] The QCA notes that the AER is in the process of developing a binding rate of return guideline. At the time of making this decision, the AER decision-making process had not been finalised and was expected to be completed by the end of 2018. As such, the QCA has not given any weight to the AER's review of its rate of return guideline, at this time.
[236] Aurizon Network, sub. 40: 43-44, 85. See AER 2017f: 94–95.
[237] Aurizon Network 2018b.
[238] Aurizon Network, sub. 40: 85.

The QCA also notes Aurizon Network has submitted that the risk-free rate and debt risk premium estimates be updated close to the time of release of the QCA's final decision.[239] The QCA does not consider that it is reasonable to revise the averaging period from that initially proposed by Aurizon Network (see Appendix F). The QCA considers that Aurizon Network has not been able to demonstrate that a revision to the averaging period is justifiable. The QCA considers that allowing Aurizon Network to subsequently revise the averaging period after the event has the potential to introduce upward bias, to the extent that Aurizon Network is likely to seek a revision only where this is to its financial advantage.

The QCA notes that Aurizon Network has the ability to manage risk associated with varying market conditions, and could have undertaken hedging activities during the proposed averaging period. The QCA provided Aurizon Network with advance notice that it was 'favourably disposed' to its proposed averaging period. Aurizon Network foreshadowed that this would allow it to undertake 'efficient implementation of any hedging plans'. An efficient benchmark entity could have hedged movements in the risk-free rate using interest rate swap contracts, protecting its investors from movements in the risk-free rate over the regulatory period. Indeed, the recommended rate of return for Aurizon Network's 2017 DAU provides an allowance for transactions costs to do just this.

However, the QCA acknowledges that the on-the-day approach for estimating time-variant WACC parameters potentially exposes Aurizon Network to the market conditions experienced during the averaging period. That is, varying market conditions can create the risk that time-variant parameter estimates obtained for the averaging period diverge from estimates that correspond with market conditions encountered in the forthcoming regulatory period.

The averaging period used to forecast the time-variant parameters will influence the value of individual WACC parameters and have implications for the resulting WACC. The QCA acknowledges that Aurizon Network may not be able to exactly match the benchmark debt management strategy. It may also not be commercially feasible, nor practical, for Aurizon Network to have its entire debt balance maturing over a short period of time—as having to refinance all of its debt at the start of the regulatory period could expose Aurizon Network to refinancing risk. In these circumstances, it may be appropriate for Aurizon Network to be compensated for, or permitted to manage, the regulatory risk arising from the on-the-day approach.

In making a decision on Aurizon Network's WACC, the QCA has taken into consideration the potential, adverse timing impact of regulatory determinations in assessing the appropriate WACC for the UT5 pricing period.

The QCA has considered alternative approaches for estimating time-variant parameters adopted in other Australian regulatory decisions. In particular, the WACC estimate obtained using:

- a 10-year bond term (and not a term-matched bond) to estimate the risk-free rate is around 5.75 per cent[240]
- an average of the interpolated RBA and Bloomberg estimates of the 10-year BBB debt risk premium for the proposed averaging period is around 5.57 per cent.

[239] Aurizon Network, sub. 40: 130.
[240] Based on a 10-year risk-free rate of 2.44%, a MRP of 6.5% and no interest rate swap costs.

The QCA considers that a WACC of 5.7 per cent provides consideration of the risk that Aurizon Network's legitimate business interests are not satisfied—arising from estimating market parameters over a nominated short-term averaging period.

5.5 Comparisons to other regulatory decisions

Aurizon Network considered that it is necessary to have regard to the reasonableness of the overall return against comparable returns of similar businesses.[241]

Aurizon Network considered that the WACC resulting from the QCA's bottom-up assessment of individual parameter estimates was lower than any other recent regulatory decision for any other infrastructure network in Australia and implies that Aurizon Network's CQCN is the lowest risk regulated asset in Australia. Aurizon Network stated the QCA needed to include an evaluation of the overall reasonableness of the return against actual return outcomes of comparable coal export supply chain infrastructure that are also typically contracted on ship/take-or-pay principles.[242]

Specifically, Aurizon Network considered that a rate of return of 5.41 per cent:

- is commensurate to assessing Aurizon Network's risk profile as similar to the risks incurred by the Water NSW–Murray Darling Basin[243]
- is in contrast with the WACC of 7.17 per cent approved for its 2016 Access Undertaking[244]
- cannot be reconciled when compared to 6.3 per cent recommended by the ACCC for the Hunter Valley Coal Network (HVCN).[245]

TCI Fund Management considered that the most appropriate comparator has to be the HVCN. Investors Mutual Limited and TCI Fund Management both noted that the QCA's rate of return is significantly below the WACC settled for the HVCN, which they considered to be a close comparator to the CQCN.[246]

In contrast, the QRC considered that the rate of return resulting from the QCA's bottom-up assessment is broadly in line with recent regulatory decisions for comparable businesses. The QRC cited the AER's 2017 decisions for gas transmission and distribution businesses in Victoria, which provided for an overall rate of return for each business of less than six per cent. The QRC submitted that the difference in the rate of return between each business, and Aurizon Network's recommended rate of return, largely reflects the movement in bond yields over the past 12 months.[247]

In considering the QCA's draft decision, the QRC adjusted the outcomes of recent regulatory decisions to account for differences in the risk-free rate, the cost of debt and gearing. From its analysis, the QRC considered that the recommended rate of return in the draft decision is higher than the allowed rate of return for comparable businesses in these recent decisions. In

[241] Aurizon Network, sub. 40: 31.
[242] Aurizon Network, sub. 40: 6, 13, 31, 86.
[243] Aurizon Network stated that it does not believe the risk profile of Aurizon Network is akin to a regulated water utility (Aurizon Network, sub. 40: 13). Investors Mutual Limited also considered that it makes no sense that Aurizon Network should earn a lower return than recent water utility decisions (IML Investors, sub. 62: 1).
[244] Aurizon Network, sub. 40: 86.
[245] Aurizon Network, sub. 40: 11. ACCC 2017: 134.
[246] TCI Fund Management, sub. 58: 1, 3-4; IML Investors, sub. 62: 1.
[247] QRC, sub. 54: 11–13, 22.

particular, the QRC stated that, after controlling for differences in the timing of measurement periods and gearing levels, the WACC allowed for the HVCN in the ACCC's April 2017 draft decision is very similar to that provided for in the QCA's draft decision.[248]

The QCA acknowledges that the averaging period used to forecast time-variant parameters will influence the estimates of individual WACC parameters and has implications for the resulting WACC calculation. Consequently, some form of 'normalisation' for timing differences is necessary to make any meaningful comparisons across different regulatory decisions.

The QCA engaged NineSquared to normalise WACC estimates obtained from recent regulatory decisions. NineSquared estimated the time-variant parameters for each of these decisions, using the methodology used by the individual regulators but accounting for differences associated with the timing of the regulatory decisions by using Aurizon Network's proposed averaging period (up to, and including, 30 June 2017).

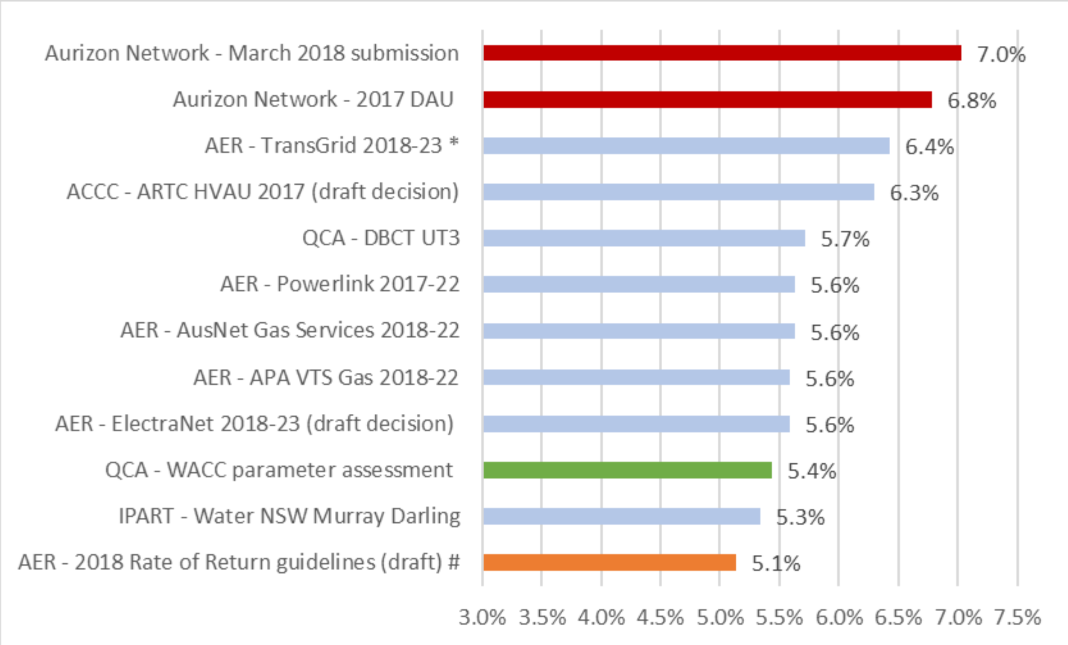
NineSquared re-estimated the WACC calculations derived in 15 recent Australian regulatory decisions. However, in order to provide for a relevant comparison, the normalised WACC comparisons in the figures below present the WACC calculations for nine recent Australian regulatory decisions, where the regulator calculates the cost of debt and does not use long-term averages to estimate it.[249] This provides a useful first step to get a meaningful comparison of overall WACC estimates.

While the normalised WACC comparison analysis suggests that the QCA's bottom-up WACC assessment of individual parameters does not result in a WACC that is an 'outlier' *per se*, it does provide for a WACC that is at the lower end of the normalised WACC estimates.

[248] QRC, sub. 54: 11–13, 23 — The QRC also adjusted the risk-free rates and debt margins of each decision to account for variations in the measurement periods used to estimate the rate of return—using the 20 business days ending 30 June 2017. The QRC stated that a WACC of 5.41% is the median WACC of these entities, while the average is 5.42%.

[249] As outlined by NineSquared, the normalised WACC comparisons are distorted to some extent when: cost of debt estimates using long-term averages are compared with point-in-time cost of debt estimates; and the comparison includes WACC calculations that adopt pre-determined parameters (for example, cost of debt) that are not subject to assessment by the regulator.

Figure 8 Normalised WACC comparison of relevant regulatory decisions for infrastructure networks in Australia — QCA's bottom-up WACC assessment



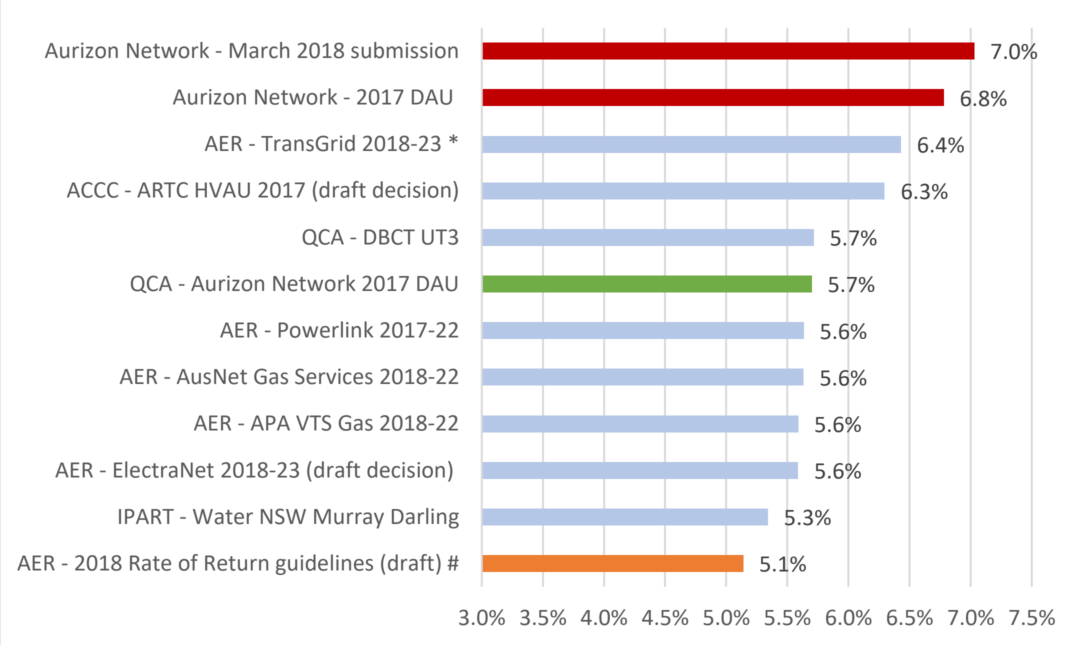
Source: NineSquared 2018 and QCA analysis. Numbers shown are rounded for presentation purposes.

*Notes: * TransGrid's cost of debt calculation has not been normalised and incorporates historical information as it continues its transition toward a trailing average cost of debt. Due to uncertainties associated with the confidential averaging periods used to estimate TransGrid's cost of debt, the AER's cost of debt estimate of 6.01% has been applied for the first regulatory year. # The QCA's estimate of the AER's Draft 2018 Rate of Return guidelines is indicative only.*

This comparative analysis supports the QCA's decision that:

- Aurizon Network's WACC estimates are unreasonable, as Aurizon Network's 2017 DAU and March 2018 submission estimates are higher than the normalised WACC calculations of relevant and comparable regulatory decisions.
- A WACC of 5.7 per cent is an appropriate WACC for Aurizon Network's UT5 pricing period, as the QCA's decision is comparable to the normalised WACCs of other recent regulatory decisions for infrastructure networks in Australia.

Figure 9 Normalised WACC comparison of relevant regulatory decisions for infrastructure networks in Australia —QCA's WACC decision



Source: NineSquared 2018 and QCA analysis. Numbers shown are rounded for presentation purposes.

*Notes: * TransGrid's cost of debt calculation has not been normalised and incorporates historical information as it continues its transition toward a trailing average cost of debt. Due to uncertainties associated with the confidential averaging periods used to estimate TransGrid's cost of debt, the AER's cost of debt estimate of 6.01% has been applied for the first regulatory year. # The QCA's estimate of the AER's Draft 2018 Rate of Return guidelines is indicative only.*

The QCA notes this analysis does not include the normalisation of the other decisions' gearing levels to reflect Aurizon Network's benchmark gearing. Different benchmark gearing levels for the regulated entities could also be considered as part of a normalisation comparison exercise. Amongst other things, the level of gearing has implications when estimating the re-levered equity beta—which may lead to a lower equity beta for many of the regulated entities considered as part of the WACC comparison exercise.

5.5.1 ACCC's draft decision for the HVCN

In relation to the ACCC's draft decision for the HVCN, Aurizon Network submitted that the HVCN is a similar asset serving the Australian coal industry and an asset which many of its customers regard as having a lower risk profile than the CQCN. Aurizon Network said that its long-term demand risks are largely consistent with those identified in the Hunter Rail Access Task Force (HRATF) submission to the ACCC on ARTC's proposed 2016 HVAU. Additionally, Aurizon Network considered that the QCA's framework is fundamentally the same as other Australian regulatory frameworks in terms of its overriding objective.[250]

TCI Fund Management also submitted that the HRATF considered the CQCN to be higher risk than the HVCN. TCI Fund Management considered that the debate around the relative risks of each network is highly informative and relevant. TCI Fund Management noted that the WACC for the HVCN was increased from 6.30 to 6.95 per cent in the ACCC's final decision.[251]

[250] Aurizon Network, sub. 40: 11, 86.
[251] TCI Fund Management, sub. 58: 4.

The QRC submitted that the UT5 WACC cannot be compared with that applied to the ARTC in respect of the HVCN. The QRC considered that the ACCC's final decision reflected highly compromised positions taken to address severe shortcomings in the regulatory framework governing ARTC:

> The fundamental issue faced by the ACCC and producers in the Hunter Valley was their inability under the regulatory framework to force the monopoly service provider to accept reasonable positions, including those identified as appropriate by the ACCC. Consequently, the ACCC and producers were forced to compromise with ARTC in key areas (in particular in relation to the WACC) to ensure that an access undertaking remained in place. Had the ACCC and producers not compromised on these issues, they faced a future with no ACCC approved access undertaking in place for the Hunter Valley Network.[252]

Regrettably, the QCA has not been able to reconcile the systematic risk calculations that underpin the ACCC's draft decision, as requested by Aurizon Network (see discussion at Figure 10).

In the absence of being able to reconcile the systematic risk calculations, the QCA is unable to comment in relation to the ACCC's draft decision systematic risk assessment of the HVCN, or why the ACCC's preliminary view was for a higher beta estimate for the HVCN in comparison to our assessment of the CQCN. While the QCA considers the ACCC's draft decision to be a relevant WACC comparison in considering Aurizon Network's rate of return, the QCA has not given it the primacy as suggested by Aurizon Network.

Rather, the QCA has undertaken a comprehensive first-principles assessment, supported by theoretical and empirical evidence, to assess Aurizon Network's systematic risk.

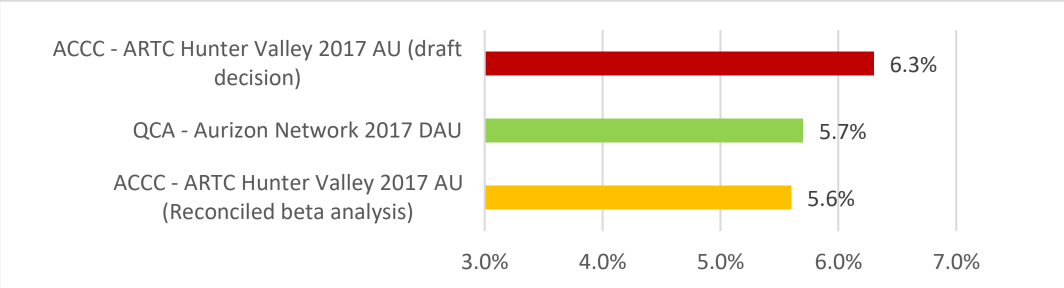
[252] QRC, sub. 54: 23.

ACCC Draft Decision HVAU considerations

The ACCC's 2017 Hunter Valley Access Undertaking (HVAU) draft decision referred to previous QCA decisions on Aurizon Network's asset beta (UT4).[253] Given that the ACCC considered ARTC's asset beta should be equal to or lower than that of Aurizon Network, the QCA is unable to reconcile the ACCC's recommended asset beta of 0.45 in its HVAU draft decision. Particularly noting the following:

- As outlined in the QCA's UT4 investigation, the QCA considered that an asset beta of 0.42 was justifiable for Aurizon Network, derived from an empirical analysis of comparator equity betas. However, the QCA decided to apply its judgement to, amongst other things, provide a beta estimate (of 0.45).
- Adopting a consistent treatment of the de-levering/re-levering approach using the same UT4 empirical data does not explain the differences.
  - Using the ACCC's approach to both de-lever and re-lever the equity beta (using the Monkhouse formula and a debt beta of 0) results in an equivalent asset beta of 0.33.
  - Using the QCA's approach to both de-lever and re-lever the equity beta (using the Conine formula and a debt beta of 0.12) results in an equivalent asset beta of 0.42.
- Using a consistent de-levering/re-levering method would actually result in a lower asset beta for the HVCN, all other things being equal. The ACCC's methodology would result in an equivalent equity beta of 0.70 for the HVCN (the ACCC proposed an equity beta of 0.94 in its draft decision), and an overall WACC of 5.6%, all other things equal (see below).

Figure 10 Normalised WACC comparison of ARTC HVAU 2017 draft decision



As such, the QCA is unable to reconcile the systematic risk calculations that underpin the ACCC's draft decision on the ARTC's rate of return—either from an equity beta or overall WACC perspective. Rather the QCA has undertaken a comprehensive first-principles assessment, supported by theoretical and empirical evidence, to assess Aurizon Network's systematic risk, as well as applied judgment to decide a WACC of 5.7%.

In any case, the ARTC's approved nominal pre-tax WACC of 7.91% was negotiated directly with coal producers and did not reflect the ACCC's preliminary views. These circumstances are not the same for the CQCN.

5.6 Reasonable ranges of individual WACC parameters

Aurizon Network considered that where judgement is required on a variable or parameter in the cost of capital formation and the value of imputation credits, the QCA consistently adopted values close to, or at the lower bound of, the QCA's estimates. Aurizon Network said that the aggregate of these components reduces the rate of return to a level that cannot be reconciled with return outcomes for comparable businesses or the current prevailing market conditions.[254]

Aurizon Network submitted that this suggests that the QCA has mechanically applied its methodology and has not applied an overall reasonableness check to the generated WACC estimate. Aurizon Network considered this to be contrary to the pricing principles in the QCA Act.[255]

[253] ACCC 2017: 156.
[254] Aurizon Network, sub. 40: 31–32, 84.
[255] Aurizon Network, sub. 40: 84.

In contrast, the QRC considered that, if anything, the QCA's approach for estimating a number of parameters is conservative and generous to Aurizon Network—for example in relation to the equity beta and MRP.[256]

The QCA disagrees with Aurizon Network that it consistently adopts values close to, or at the lower bound of, the estimates. Where a range is identified for a specific parameter, the QCA generally adopts the midpoint of this range.

The QCA notes that certain ranges outlined in Aurizon Network's submission are based on methodological choices, which are due to binary decisions and not a range of continuous estimation outcomes.

In any case, the QCA has not mechanically applied a methodology for estimating Aurizon Network's WACC. Rather, the QCA has considered the reasonableness of the overall WACC, in deciding that Aurizon Network's proposed WACC is not appropriate to approve and that a rate of return of 5.7 per cent is appropriate.

The QCA again emphasises that what is important in assessing Aurizon Network's 2017 DAU is consideration of an overall WACC that is appropriate to approve. It is not the case that the QCA considers that simply adopting an estimate for each of the individual parameters that is within the reasonable range of the estimate will necessarily provide for an overall rate of return that is appropriate to approve. Similarly, adopting upper bound estimates for each of the individual WACC parameters is likely to give rise to an unreasonable rate of return.

For the reasons set out above, and in Appendix F, the QCA considers that a rate of return of 5.7 per cent is an appropriate WACC for the UT5 pricing period.

5.7 Incentives to invest

Aurizon Network raised concerns that the QCA's WACC methodology reduces the willingness of Aurizon Network to continue to invest in maintaining existing, and adding new, capacity to the rail network, beyond essential replacement capital expenditure. Furthermore, Aurizon Network stated that it is unlikely to support business cases to undertake reliability and operational performance improvement investments to reduce and/or improve supply chain costs across the CQCN.

Aurizon Network considered that this will result in greater recourse to user funding; otherwise, network investment will not occur, and such an outcome is inconsistent with, and contrary to, the objective of Part 5 of the QCA Act. [257]

Furthermore, Aurizon Network submitted that a second order effect of Aurizon Network being discouraged from investing is the asymmetric impact on competition in upstream or downstream markets.[258]

TCI Fund Management considered that a WACC of 5.41 per cent is too low in absolute terms to justify sensible levels of investment in the CQCN. Similarly, Investors Mutual Limited considered that the draft decision removed all incentive for Aurizon Network to invest, or to take operating risks.[259]

[256] QRC, sub. 53: 13, 22.
[257] Aurizon Network, sub. 40: 13, 82–83, 87–88.
[258] Aurizon Network, sub. 40: 87–88.
[259] TCI Fund Management, sub. 58: 1; IML Investors, sub. 62: 1.

The QCA considers that a rate of return of 5.7 per cent is reasonable and appropriate to approve having regard to the criteria in s. 138(2) of the QCA Act. The QCA's WACC decision sufficiently provides for the commercial and regulatory risks involved and provides an adequate return to Aurizon Network such that it will be able to attract and undertake necessary investment. We do not accept that a WACC of 5.7 per cent will in some way contribute to or cause Aurizon Network to undertake operational decisions that adversely impact on network reliability or utilisation, or are otherwise to the detriment of the CQCN supply chain.

Additionally, noting that Aurizon Network has the ability to negotiate access conditions with access seekers, the QCA considers that mechanisms provided in the regulatory framework are sufficient for Aurizon Network to manage risk that is specific to a particular expansion investment.

6 VOLUME FORECASTS

6.1 Aurizon Network's 2017 DAU proposal

Aurizon Network proposed annual volume forecasts for each coal system, based on a mine-level forecast. Aurizon Network's proposed volume forecasts are presented in Table 27.

Table 27 Aurizon Network's 2017 DAU—volume forecasts by system (million tonnes)

System	*2017–18*	*2018–19*	*2019–20*	*2020–21*
Blackwater	69.9	71.3	71.3	71.3
Goonyella	120.3	120.3	120.3	120.3
Moura	10.2	10.2	10.2	10.2
Newlands (excluding GAPE)	9.2	9.2	9.2	9.2
GAPE	16.2	17.5	17.5	17.5
Total	**225.7**	**228.4**	**228.4**	**228.4**

Source: Aurizon Network, sub. 1: 123.

Note: Minor differences in Aurizon Network's volume forecasts were identified in its modelling.

6.2 Key issues identified during the QCA's investigation

The QCA has considered all elements of Aurizon Network's proposed volume forecasts for the 2017 DAU regulatory period in making its decision. The following issues attracted comment from stakeholders, or were identified for further consideration:

- recent market conditions for seaborne coal exports (section 6.3.1)
- the market outlook (section 6.3.2).

6.3 QCA analysis and decision

Summary of decision 6.1

- **The QCA considers the appropriate way for Aurizon Network to amend its 2017 DAU is to revise its proposed volume forecasts for the central Queensland coal network based on the forecasts provided in Table 30.**

After consideration of the updated mine-specific and market information submitted by stakeholders, the QCA considers that Aurizon Network's revised volume forecasts submitted in March 2018, with the inclusion of an additional one million tonnes per annum from 2018–19,[260] represents a reasonable forecast of volumes for the UT5 regulatory period.

Aurizon Network acknowledged that the volume forecasts submitted as part of its 2017 DAU appeared conservative due to the improved market outlook driven by higher coal prices. Additionally, Aurizon Network noted that there has been updated information regarding several mines returning from care and maintenance or expanding operations.

[260] This reflects greater clarity with respect to mine-specific information in the Blackwater System that has emerged since Aurizon Network's revised volume forecast was submitted.

As part of its 2017 DAU submission, Aurizon Network submitted its proposed volume forecasts based on its demand outlook for domestic and export coal in the CQCN; volumes contracted; customer information; historical railings; and expected production growth.[261] Aurizon Network also considered recent market conditions and the market outlook for coal producers in the CQCN.

The QRC said that the accuracy of the volume forecasts should be carefully considered by the QCA, with a view to minimising the timing differences caused by differences between forecast and actual volumes.[262] Anglo American considered that past volume forecasts submitted by Aurizon Network have generally been inappropriate and unreliable, materially ignoring the individual producer’s saleable/railing forecast.[263]

The QCA engaged RMI to provide independent, expert advice to inform our assessment of Aurizon Network's volume forecasts for the UT5 regulatory period. The volume forecasts provided by RMI are outlined in Table 28.[264] The QCA's draft decision indicated the QCA's preliminary view was that it considered it appropriate for Aurizon Network to revise its proposal to broadly align with the volume forecasts provided by RMI.

Table 28 RMI’s volume forecasts by system (million tonnes)

System	*2017–18*	*2018–19*	*2019–20*	*2020–21*
Blackwater	59.38	60.58	61.58	61.58
Goonyella	124.75	128.45	130.25	130.25
Moura	14.30	17.50	18.50	18.50
Newlands (excluding GAPE)	11.70	14.20	14.20	14.20
GAPE	16.15	19.15	24.15	29.15
WIRP	10.10	10.30	10.60	10.60
Total	**236.4**	**250.2**	**259.3**	**264.3**

RMI considered Aurizon Network's 2017 DAU volume forecasts to be overly conservative in the current coal price environment. RMI forecasts seaborne coal demand to grow steadily over the forecast period, with central Queensland coal producers in a strong position to meet this demand due to their lower cost and, importantly, higher quality coals they produce.

Aurizon Network agreed with RMI concerning the relative quality of coal supply in Central Queensland and the long-term opportunity for export growth, in particular the resilience of Australian seaborne export volume (compared to competing export nations) in periods of subdued coal prices. However, Aurizon Network contended:

- RMI’s seaborne volume projections appear in excess of alternative market forecasters

[261] Aurizon Network, sub. 1: 122.
[262] QRC, sub. 21: 52.
[263] Anglo American, sub. 18: 7.
[264] In March 2017, there was uncertainty as to whether Cook Colliery would continue to operate due to an underground flooding event. This uncertainty continued, with the mine owner Caledon subsequently entering into voluntary administration. RMI excluded railings from Cook Colliery from its forecast, due to this uncertainty.

- the resurgence of export volume from competing export nations—United States, Indonesia and China—may not have been fully considered by RMI[265]
- 2017–18 volumes are tracking materially below the level required to achieve RMI's 2017–18 forecast
- individual mine forecasts contain several anomalies or contain volumes that are optimistic for mines returning from care and maintenance or expanding operations.[266]

While Aurizon Network considered that RMI's volume forecasts were too high, it agreed with RMI that the volume forecasts submitted as part of the 2017 DAU appear to look conservative due to the improved market outlook driven by higher coal prices. Additionally, Aurizon Network noted that there has been updated information regarding several mines returning from care and maintenance or expanding operations.

Following the draft decision, Aurizon Network revised its volume forecasts. Aurizon Network proposed to accept most of RMI's volumes forecast, but proposed changes to volumes forecast for several mines—submitting information to support its proposed changes to RMI's individual mine forecasts.

Aurizon Network's revised volume forecasts are presented in Table 29.

Table 29 Aurizon Network's revised volume forecasts by system (million tonnes)

System	*2017–18*	*2018–19*	*2019–20*	*2020–21*
Blackwater	64.60	66.18	67.18	68.18
Goonyella	127.55	130.95	131.45	131.45
Moura	11.50	15.00	16.50	16.50
Newlands (excluding GAPE)	11.70	13.20	13.20	13.20
GAPE	15.85	18.85	18.85	18.85
Total	**231.20**	**244.18**	**247.18**	**248.18**

Source: Aurizon Network, sub. 40: 148.

Aurizon Network noted that as more updated information becomes available on the mines where volumes are uncertain, this will be reflected during the regulatory period within the annual review of reference tariffs.[267, 268]

QRC and Rio Tinto also submitted mine-specific forecasts and information for consideration in estimating total volume forecasts.[269] Although the information provided was incomplete, in that it did not account for all volumes forecast/contracts in the CQCN, the QCA has taken into consideration this information as part of its assessment.

Importantly, the QCA notes the positive market outlook for CQCN coal producers over the UT5 regulatory period, as outlined by both RMI and Aurizon Network. The forecast growth in global demand for metallurgical and thermal coal, the strong position of CQCN producers in the

[265] For instance, Aurizon Network noted that although China's mining capacity is understood to have reduced in 2017, production has increased by 4% in 2017 compared to 2016.
[266] Aurizon Network, sub. 40: 140–145.
[267] As required under cl. 4.1 of Schedule F of the 2017 DAU.
[268] Aurizon Network, sub. 40: 148.
[269] QRC, sub. 54; Rio Tinto, sub. 59.

seaborne coal markets and mine-specific information provided by stakeholders support Aurizon Network's revised volume forecast.

The QCA's decision is that the 2017 DAU should be amended to reflect the volume forecasts as presented in Table 30. The volume forecasts reflect Aurizon Network's revised volume forecasts, except that the QCA considers an additional one million tonnes per annum should be included from 2018–19 to take account of the information relating to the Blackwater System which has since become available. This ensures the volume forecasts are based on the best and latest available information and appropriately balances the interests of all stakeholders and the public interest (s. 138(2)(b), (d), (f) and (h)).

Table 30 QCA decision—volume forecasts by system (million tonnes)

System	*2017–18*	*2018–19*	*2019–20*	*2020–21*
Blackwater	64.60	67.18	68.18	69.18
Goonyella	127.55	130.95	131.45	131.45
Moura	11.50	15.00	16.50	16.50
Newlands (excluding GAPE)	11.70	13.20	13.20	13.20
GAPE	15.85	18.85	18.85	18.85
Total	**231.20**	**245.18**	**248.18**	**249.18**

The QCA has also reviewed Aurizon Network's proposed proportion of forecast railings undertaken by electric traction services for the UT5 regulatory period. Overall, the QCA considers Aurizon Network's proposed proportion of electric traction services to be a reasonable basis for forecasting electric traction services.

The QCA notes that due to uncertainty, the QCA's volume forecast assessment did not account for any potential implications in volumes resulting from Aurizon Network changing management practices.

Specific stakeholder submissions are further addressed below.

Table 31 Stakeholder submissions on volume forecasts

Stakeholder submission	*QCA response*
Pacific National was concerned with the discrepancy between RMI's forecasts and those proposed as part of the 2017 DAU. Pacific National considered that accurately assessing the volume forecast cannot be done at the system level and sought more information (ideally at a mine or branch line level) of the volume forecast.[270]	As outlined above, Aurizon Network agreed with RMI that the volume forecasts submitted as part of the 2017 DAU appear to look conservative and has revised its volume forecasts. In assessing the volume forecasts, the QCA has considered mine-specific information provided by stakeholders. However, providing mine-specific forecasts is limited, due to such information being considered commercially sensitive.
Rio Tinto submitted that RMI appear to have utilised publically available information on expansion projects without cross referencing whether these projects are supported by contracted capacity. Further, no risk weighting on these projects appears to have been	As part of its analysis, RMI provided confidential information in relation to detailed forecast demand and export railings—on a mine by mine and rail system basis. Such analysis also included consideration of contractual arrangements and whether the existing total CQCN infrastructure was

[270] Pacific National, sub. 61: 21.

Stakeholder submission	QCA response
applied. Rio Tinto submitted that any system forecast should cross reference the following in order to come to a more considered view: • confirm forecast tonnes and project tonnes with producers, port and track—discounting (either in time or volume) project tonnes based upon the absence of binding take-or-pay contracts • confirm system capability with integrated logistic groups operating within the supply chains. Rio Tinto said that RMI appear to have overlooked any discussion around the ramping down of mine production at the end of mine life. Rio Tinto is of the view that Aurizon Network's proposed system forecasts accords more with a considered view of the contracted position, an understanding of system capability and an understanding of production outcomes. Rio Tinto submitted that Aurizon Network's forecast for the Goonyella System and total volumes forecast for the UT5 regulatory period seem justifiable.[271]	sufficient to handle its forecast volumes. In assessing the volume forecasts, the QCA has considered all mine-specific and port-specific information submitted by stakeholders. The QCA reiterates that Aurizon Network has revised its volumes forecast, which in general represent a reasonable view of likely volumes for the UT5 regulatory period—if amended to account for an additional one million tonnes per annum from 2018–19.

6.3.1 Recent market conditions for CQCN coal producers

Aurizon Network submitted that, since 2010 the global coal market has been subject to a sustained decline in coal prices and significant volatility. Coal producers responded by driving productivity gains and increasing volumes to maintain lower unit costs. In recent years, record coal railings were achieved in the CQCN against a declining coal price.[272]

Despite the drive to lower unit costs, a number of mines were put into care and maintenance, others were divested and some entered voluntary administration. Aurizon Network submitted that in this volatile market, demand uncertainty is an emerging trend for Aurizon Network's customers. This is seen in requests for shorter-term access agreements and short-term extensions to below-rail access rights.[273]

Underlining the market volatility, Aurizon Network noted that the global coal market experienced a rally in September 2016:

- The metallurgical coal spot price reached US$311.50 per tonne in November 2016, increasing 317 per cent from a low in November 2015.
- The thermal coal spot price reached US$114.80 per tonne in November 2016, increasing 130 per cent from a low in January 2016.[274]

Aurizon Network considered that the primary driver for this price surge was a reduction in China’s domestic supply, due to the implementation of the 276-day working policy (from the previous limit of 330 days).[275] RMI also reported the significant increases in coal prices, noting the impact of the Chinese Government placing most mines on a five-day rather than a seven-

[271] Rio Tinto, sub. 59: 2–3.
[272] Aurizon Network, sub. 1: 16–18.
[273] Aurizon Network, sub. 1: 18–20.
[274] Aurizon Network, sub. 1: 20.
[275] Aurizon Network, sub. 1: 20.

day roster and closure of a number of unviable mines. RMI agreed with Aurizon Network that fluctuations in China's domestic production have had the biggest impact on seaborne coal price volatility during this period.[276, 277]

Additionally, Aurizon Network submitted that a colder winter forecast for China resulted in early restocking—with China steel mills and thermal power plants turning to the seaborne market to meet coal shortages, thus putting upward pressure on the spot price. Aurizon Network considered that the speed and scale of the metallurgical coal price escalation in 2016 has outpaced other rallies seen over the past 10 years.[278]

RMI reported that China appears to be supporting domestic coal producers by adjusting the operating regime, and closing high cost mines, to maintain domestic prices and minimum levels of profitability for a majority of its domestic coal producers. RMI considered that this will effectively provide a floor for the seaborne market and should reduce both price and seaborne demand volatility. RMI stated that such conditions will be very attractive to Queensland exporters who have lower cost of production and higher quality coals.[279]

6.3.2 Market outlook for CQCN coal producers

Aurizon Network's submission and RMI's analysis portrayed a positive market outlook for both:

- forecast growth in global demand for metallurgical and thermal coal
- the strong position of CQCN producers in the seaborne coal markets.

Aurizon Network submitted that it expects there will be an ongoing long-term demand for the output of the central Queensland coal market due to the quality of coal reserves, cost competiveness, proximity to end markets and access to reliable world-class infrastructure.[280]

Metallurgical coal accounted for approximately 76 per cent of coal hauled across the CQCN in 2015–16. Aurizon Network noted that metallurgical coal has no viable alternative in the Basic Oxygen Furnace (BOF) method of steelmaking, which represents 70 per cent of global steel production. As such, it is expected that metallurgical coal will be required for the majority of steel production for the longer term. Aurizon Network considered that a high level of steel consumption is expected to be driven by more consumer-intensive manufacturing and export. Many steel producing countries, including Japan and South Korea, will continue to rely on imports to meet their coal needs due to a lack of domestic reserves.[281]

Aurizon Network submitted that low cost and reliable export infrastructure and capacity to service increased demand underpins Australia’s position in the global seaborne metallurgical

[276] Resource Management International 2017: 5, 12.
[277] Aurizon Network and Resource Management International also noted that the Chinese Government subsequently made announcements relaxing some of the operating constraints on domestic coal production, which has resulted in changes to coal prices (Resource Management International 2017: 5; Aurizon Network, sub. 1: 20).
[278] Aurizon Network, sub. 1: 20.
[279] Resource Management International 2017: 12.
[280] Aurizon Network, sub. 1: 20.
[281] Aurizon Network, sub. 1: 20–21.

coal market. Australia has the lowest average transportation and port costs in comparison to other significant metallurgical coal exporting nations.[282, 283]

Aurizon Network submitted that long-term demand is also expected for thermal coal, noting key export destinations of Japan, South Korea, India and China plan to continue using coal for power generation through the adoption of more efficient power generation technologies. Noting climate change as a key issue for thermal coal demand, Aurizon Network said that, on average, Australia's thermal coal exports have a high energy content and relatively low ash content, which should underpin demand for thermal coal produced in the CQCN.[284]

RMI forecasts that seaborne coal demand is likely to grow steadily over the forecast period, with major customers in China, India, Vietnam, South East Asia and the Middle East looking for high quality coal to supply their power stations, cement factories and steel mills. RMI considered that the key drivers for the seaborne coal market are the developing economies of China, India and South East Asia, which are experiencing growth in the range of 5–7.5 per cent per annum.[285]

RMI reported that there are several new markets in these regions driving global growth in seaborne demand for coking coal, with these economies experiencing industrialisation and urbanisation at a pace and scale that are a key determinant for global coking coal demand. Furthermore, these markets have very little domestic coking coal supply and will have to rely on imported coal to meet their growing steel mill needs.[286]

RMI considered that thermal coal demand will be driven by construction of High Efficiency Low Emissions (HELE) thermal coal power stations. It is also expected that a further 45 million tonnes of seaborne supply will be required to replace falling exports from Indonesia as its domestic generation demand grows.[287]

RMI stated that China's diminishing oversupply and short-term strength in imports are providing an improving market and pricing environment for all seaborne coal exporters. In particular, this will provide a floor on seaborne coal prices as the Chinese Government adjusts its production base to maintain minimum levels of profitability for domestic coal producers.[288]

In addition to forecasting seaborne coal demand to grow, RMI considered that CQCN producers are in a strong position to accept this demand. RMI noted that coal producers in the CQCN have competitive costs and high quality coal that is in demand in the seaborne coking and thermal coal markets. Furthermore, very little capital is required for central Queensland producers to meet growing demand over the regulatory period, as coal will be supplied mostly from existing mines and will utilise existing infrastructure capacity. This leaves the CQCN producers in a strong competitive position with regard to other countries over the forecast period.[289]

[282] Underpinned by Australia's established heavy-haul coal networks interconnected with a small number of large port terminals, which are in close proximity to the largest importers of metallurgical coal, India and China.
[283] Aurizon Network, sub. 1: 21.
[284] Aurizon Network, sub. 1: 21–22.
[285] Resource Management International 2017: 5, 9.
[286] Resource Management International 2017: 14.
[287] Resource Management International 2017: 15.
[288] Resource Management International 2017: 6, 16.
[289] Resource Management International 2017: 6, 20.

7 OPERATING COST ALLOWANCE

7.1 Aurizon Network's 2017 DAU proposal

Aurizon Network's proposed allowable revenues and reference tariffs are based on an operating expenditure allowance for the UT5 pricing period of $855 million (in nominal terms), as set out in Table 32.

Table 32 Aurizon Network's proposed operating expenditure ($m)

Category	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total*
System-wide and regional costs	69.37	71.33	73.95	75.27	289.91
Corporate overheads	49.08	50.46	51.58	52.65	203.77
Risk and insurance	9.04	9.23	9.41	9.61	37.29
Transmission and connection costs	78.69	80.31	81.87	83.45	324.32
Total	**206.18**	**211.34**	**216.81**	**220.98**	**855.31**

Totals may not add due to rounding.

Source: Aurizon Network spreadsheets.

In addition, Aurizon Network's 2017 DAU includes reference tariffs for the Blackwater and Goonyella Systems to recover electric traction energy charges (EC reference tariff components). These costs are subject to an *ex post* reconciliation under Schedule F of Aurizon Network’s 2017 DAU which adjusts reference tariffs for any difference between forecast and actual electric energy costs. Aurizon Network's proposed electric traction energy costs are set out in Table 33.

Table 33 Aurizon Network's proposed electric traction energy costs ($m)

	2017–18	*2018–19*	*2019–20*	*2020–21*	*Total*
Electric traction energy costs	52.77	54.89	55.56	56.24	219.46

Source: Aurizon Network sub. 1: 243.

7.2 Key issues identified during the QCA's investigation

The QCA has considered all elements of Aurizon Network’s 2017 DAU proposed operating expenditure allowance in making this decision. The following issues attracted comment from stakeholders, or were identified for further consideration:

- determining the appropriate base year to assess operating expenditure allowances for system-wide and regional costs (section 7.5.2) and corporate overheads (section 7.6.2)
- allocation of Aurizon Holdings Limited (the 'Aurizon group') shared costs (corporate overheads) to Aurizon Network, including impacts of corporate restructuring (section 7.6.3)
- allocation of costs to below-rail services, as well as between coal-carrying and non-coal carrying train services, for system-wide and regional costs (section 7.5.3) and corporate overheads (section 7.6.3)
- escalation of allowances (section 7.10) and prudent step changes to base year allowances for system-wide and regional costs (section 7.5.4) and corporate overheads (section 7.6.4)

- allowances for insurance and self-insurance costs (section 7.7)
- appropriateness of proposed electricity transmission and connection costs (section 7.8) and electric traction energy costs (section 7.9).

7.3 Overview of the QCA's decision

Summary of decision 7.1

- **The QCA considers the appropriate way for Aurizon Network to amend its 2017 DAU is to revise its proposed allowable revenues and reference tariffs for the UT5 pricing period to reflect the operating expenditure allowances set out in Table 34 and Table 35.**

The QCA has assessed each element of Aurizon Network's proposed operating expenditure allowance and considers it not appropriate to approve, having regard to the factors at s. 138(2) of the QCA Act.

The QCA considers Aurizon Network's proposed operating expenditure allowance is higher than reasonably required to provide below-rail services to coal-carrying trains during the UT5 pricing period. In our view, this does not appropriately balance Aurizon Network's legitimate business interests, the public interest, and the interests of access seekers and users. In addition, such an outcome would not promote the economically efficient operation, use of and investment in infrastructure underpinning the service because it would materially overcompensate Aurizon Network.

Table 34 sets out the QCA's decision on allowances for each category of operating expenditure and Table 35 sets out the QCA's decision on indicative electric traction energy costs and EC reference tariff components.

Table 34 QCA decision on Aurizon Network's UT5 operating expenditure ($m)

Category	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total*
System-wide and regional costs	65.31	67.23	71.40	72.32	276.26
Corporate overheads[a]	45.15	46.15	53.87	55.15	200.32
Risk and insurance	8.21	8.59	8.84	9.06	34.70
Less: Non-coal allocation	(0.81)	(0.83)	(0.93)	(0.95)	(3.52)
Transmission and connection	72.06	70.20	71.86	73.56	287.68
Total	**189.92**	**191.34**	**205.02**	**209.15**	**795.43**

Totals may not add due to rounding.

a. Includes opex-funded restructure overhead in 2019–20 and 2020–21 (section 7.6.3).

Table 35 QCA decision on Aurizon Network's indicative electric traction energy costs and reference tariff components

	2017–18	*2018–19*	*2019–20*	*2020–21*	*Total*
Electric traction energy costs ($m)	69.51	63.58	65.09	66.63	264.82
QCA forecast egtk ('000's)	68,569,977	70,137,273	70,607,021	70,623,681	279,937,953
Indicative EC component ($/'000 egtk)	1.014	0.907	0.922	0.944	n/a

The QCA's decision reflects the net result of various adjustments to Aurizon Network's 2017 DAU proposed operating expenditure that the QCA considers appropriate, having regard to the factors at s. 138(2) of the QCA Act. These adjustments include:

- adopting 2015–16 as the forecasting base year, rather than 2014–15 (sections 7.5.2 and 7.6.2)
- allowing some step changes where reasonable costs are not reflected in the base year expenditure (sections 7.5.4 and 7.6.4) and other adjustments to base year costs
- decreasing the below-rail allocation of Network Finance costs (section 7.5.3)
- increasing the allocation of costs to non-coal carrying train services for the 'Network Train Operations' function (section 7.5.3)
- reducing proposed corporate overheads for corporate accommodation and shared IT services (section 7.6.3)
- including cost reductions to reflect operational sites to be decommissioned, inclusion of identified savings from transformation activities, and correction for double-counting (section 7.6)
- inclusion of appropriate corporate overhead costs associated with the transfer of functions resulting from corporate restructuring (section 7.6.3)
- reducing proposed commercial insurance and self-insurance costs (section 7.7)
- using updated electricity transmission and connection cost forecasts (section 7.8) as well as electric traction energy forecasts (section 7.9)
- substituting Aurizon Network's wage price index (WPI) and consumer price index (CPI) inflation forecasts with alternative estimates (section 7.10)
- applying a general allocation of operating costs to non-coal services, in recognition of costs associated with providing access to the declared service for non-coal traffic (section 7.11).

The QCA's adjustments result in a total operating cost allowance of $795 million (excluding electric traction energy costs) for the UT5 pricing period, compared with Aurizon Network's proposal of $855 million. In aggregate, the QCA considers this is a material difference and therefore considers that Aurizon Network's proposed operating expenditure allowance is not appropriate to approve. The QCA considers it appropriate to make this decision having regard to the matters set out in s. 138(2) of the QCA Act and for the reasons outlined in this decision.

The QCA's decision on operating expenditure appropriately balances Aurizon Network's legitimate business interests, the public interest, and the interests of access seekers and access holders. In addition, this decision advances the object of Part 5 of the Act and the pricing principles at s. 168A(a) and (d), by providing incentives for Aurizon Network to reduce costs or otherwise improve productivity, while generating expected revenues at least enough to meet the efficient costs of providing access to the declared service.

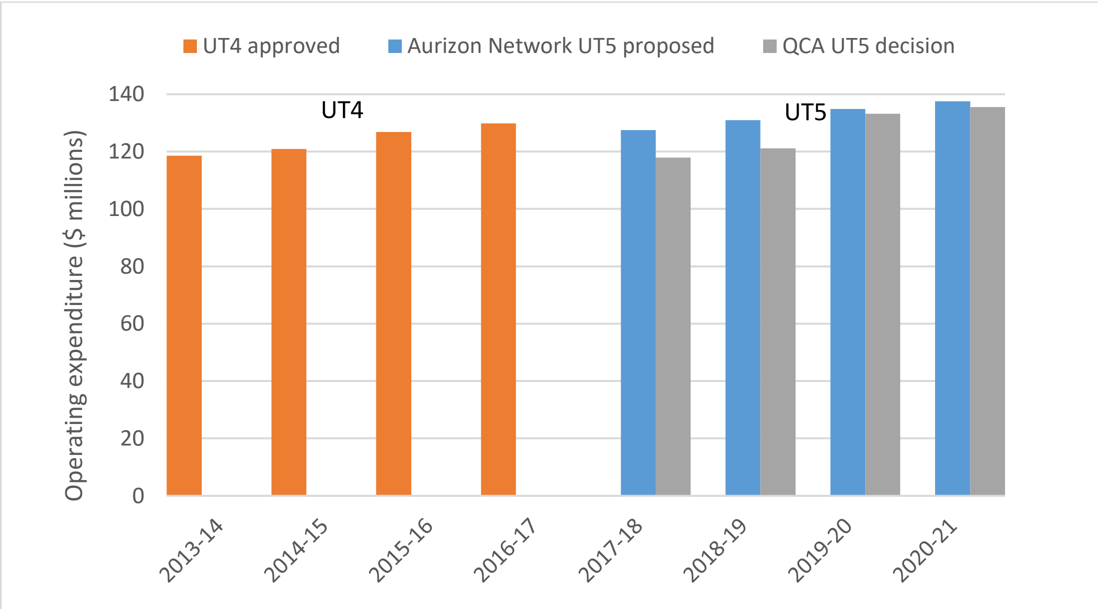
The QCA’s operating expenditure allowance is around $52 million or 7 per cent higher than the draft decision allowance. This difference is the result of considering new information and analysis to inform:

- a transitional reclassification of some costs from capital expenditure to corporate overhead (increase of $13 million)

- revised allocations for Network Train Operations (increase of $4 million), Network Finance (increase of $1 million) and IT services (increase of $17 million), where further supporting information and justification has been provided
- allowances for additional step changes and cost revisions where further supporting information and justification has been provided (increase of $27 million)
- a revised allowance for risk and insurance costs (increase of $1.5 million)
- revised allowances for transmission and connection costs (decrease of $8 million)
- application of a general allocation of operating costs to non-coal services (decrease of $3.5 million).

Figure 11 sets out the QCA's decision on Aurizon Network's operating expenditure allowance for the UT5 pricing period, compared with Aurizon Network's 2017 DAU proposal, and allowances approved in the 2016 Undertaking. Transmission and connections costs are excluded from this analysis as these costs are largely exogenous and are passed through to customers at cost.

Figure 11 Aurizon Network's approved UT4 operating expenditure compared with UT5 proposal and QCA decision, excluding transmission and connection costs ($m)



The remaining sections of this chapter discuss Aurizon Network's operating expenditure proposal and outline the QCA's analysis and assessments.

7.4 Overview of Aurizon Network's approach

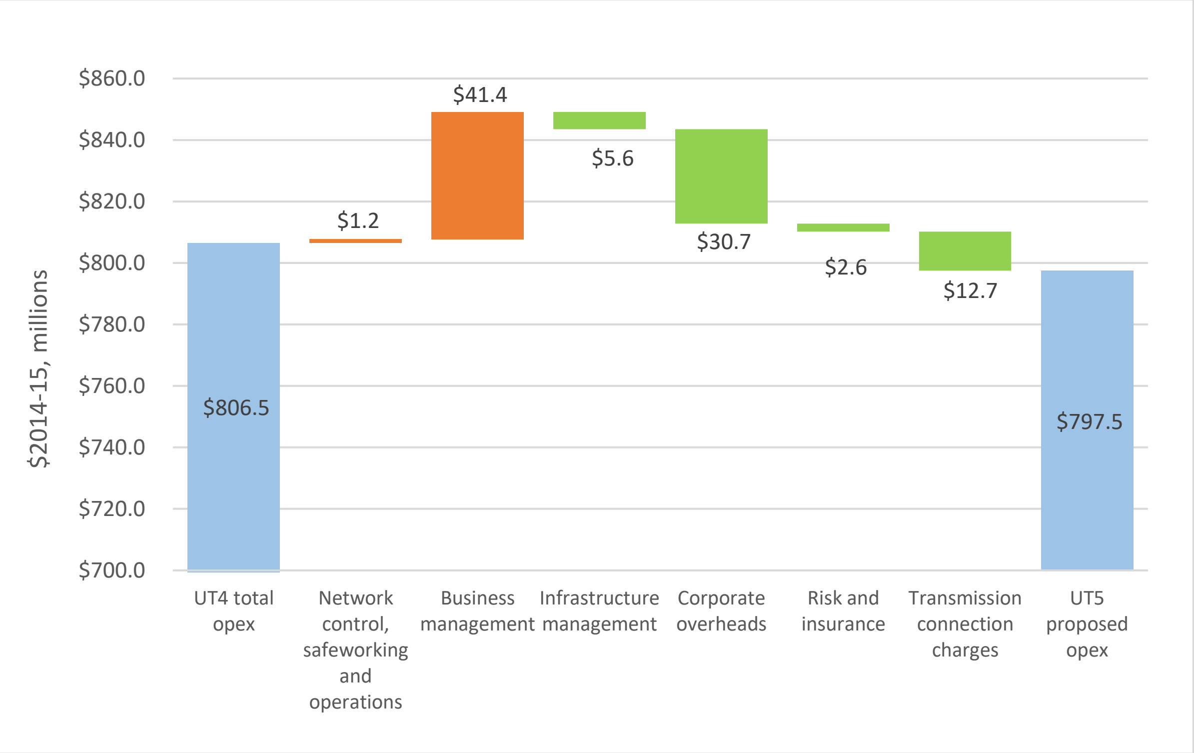
Aurizon Network said that its operating expenditure proposal for the UT5 pricing period was consistent with the methodologies and cost base approved by the QCA in the 2016 Undertaking as approved in October 2016.[290] Aurizon Network said that due to the timing of the submission,

[290] Aurizon Network, sub. 1: 196.

it has developed its operating cost proposal using actual costs incurred in 2014–15 as the starting point.[291]

Figure 12 illustrates the drivers of the change between Aurizon Network's approved UT4 allowance and its proposed UT5 allowance.

Figure 12 Aurizon Network's proposed UT5 operating expenditure—real change in costs ($2014–15 million)



Source: Aurizon Network, sub. 1: 197.

Aurizon Network attributed the change in forecast operating expenditure to the overall impact of the following:

- an increase in direct costs—due to reallocation of Network Finance and Network Legal costs from corporate overheads to direct Business Management costs
- a decrease in corporate overheads—due to reallocation of Network Finance and Network Legal functions to direct costs
- a decrease in external costs—due to optimisation of the number of transmission connection points within the electrified network
- inflation—escalation of real costs in line with the QCA approved application to the relevant categories of operating expenditure.

[291] Aurizon Network, sub. 1: 204–205. The QCA sought information from Aurizon Network on its 2015–16 operating costs has considered that information. Aurizon Network also proposed revisions to various costs as part of its 12 March 2018 submission to the QCA (Aurizon Network, sub. 40) and accompanying models. However, unless otherwise stated, references to Aurizon Network's proposed operating expenditure refer to those costs initially submitted with the 2017 DAU in November 2016, which are derived using 2014–15 as the cost base year.

Aurizon Network stated that it has also realised productivity improvements and cost efficiencies which have been included in its operating expenditure proposal, including:

- reductions in labour costs
- consolidation of management positions
- implementation of network control systems for more efficient traffic management
- minimising professional consultancy and external services expenditures.[292]

Aurizon Network said that these initiatives have enabled an annual cost reduction of $2.2 million in real terms relative to the proposed efficient base year (2014–15).[293]

Stakeholder submissions

Stakeholders raised a number of issues regarding Aurizon Network's proposed operating expenditure, which the QCA has considered in reaching its conclusions. Broadly, stakeholders expressed general concerns with:

- proposed increases in costs compared with those approved for the 2016 Undertaking[294]
- the efficiency of proposed costs and the need for benchmarking[295]
- the allocation of costs[296]
- a perceived lack of detail provided in Aurizon Network's supporting submission.[297]

Stakeholders expressed varied views on the preliminary positions outlined in the QCA's draft decision.

Aurizon Network submitted that the operating cost allowance proposed in the draft decision would significantly under-compensate Aurizon Network for its efficient costs.[298] Aurizon Network provided new information in support of its proposed step changes and base year adjustments, and submitted a revised estimate of corporate overhead costs.

In contrast, Pacific National supported the draft decision and said the QCA's proposed operating cost allowance was more reflective of an efficient below-rail operator than the costs submitted by Aurizon Network in its 2017 DAU.[299]

The QRC supported a number of the QCA's preliminary positions but retained concerns regarding benchmarking, allocation of specific system-wide and regional costs, and corporate overheads.[300] Anglo American broadly supported the draft decision positions on operating expenditure, but shared the concerns raised by the QRC.[301]

292 Aurizon Network, sub. 1: 194.
293 Aurizon Network, sub. 1: 194.
294 Anglo American, sub. 18: 11–13; sub. 57: 7; Fitzroy, sub. 22: 2; QRC, sub. 21: 46, 48–49.
295 Anglo American, sub. 18: 11–12; QRC, sub. 21: 46–50; QRC, sub. 53: 23–24.
296 Anglo American, sub. 18: 11–13; Pacific National, sub. 19: 6; sub. 61: 12; QRC, sub. 21: 47, 48; sub. 53: 23–24.
297 Anglo American, sub. 18: 11–12; QCoal, sub. 16: 8; QRC, sub. 21: 46; Anglo American, sub. 57: 7; Pacific National, sub. 61: 12.
298 Aurizon Network, sub. 40: 155.
299 Pacific National, sub. 61: 13.
300 QRC, sub. 53: 23–27.
301 Anglo American, sub. 57: 7.

Aurizon Bulk expressed concerns with the QCA’s proposed deductions to operating costs in recognition of non-coal below-rail activities.[302]

These matters are addressed in this chapter, where relevant.

The QCA's assessment approach

When considering reference tariffs and allowable revenues for the UT5 pricing period, the QCA has assessed the operating expenditure allowance proposed by Aurizon Network in providing below-rail services to coal-carrying trains, having regard to the factors in s. 138(2) of the QCA Act.[303]

In reaching its decision, the QCA has considered the legislative framework, the efficient level of expenditure (including the allocation of costs to reference tariffs for coal-carrying train services) and the efficient allocation of shared overhead costs to the Aurizon Network business, among other matters.

Aurizon Network submitted that its operating expenditure proposal for the UT5 pricing period is consistent with the methodologies and cost base approved by the QCA in the 2016 Undertaking, as approved in October 2016. While the QCA notes that the proposal is largely consistent with the approved UT4 arrangements, we have reviewed all aspects of Aurizon Network's UT5 operating expenditure proposal afresh, based on the information available to us at this time.

The QCA has not developed detailed bottom-up estimates of efficient operating costs on a category- or program-specific basis. While we have undertaken a detailed review of certain aspects of Aurizon Network's proposed operating costs to test their efficiency and prudency, we are ultimately guided by whether the overall level of expenditure is appropriate. In making this assessment, we have considered whether the proposed expenditure allowance is sufficient for Aurizon Network to recover at least its efficient costs of providing the declared service, while balancing the legitimate business interests of Aurizon Network, and the interests of its customers and the general public. In doing so, our approach (illustrated in Figure 13) involves the following steps:

(1) Review Aurizon Network’s proposed expenditure, considering forecasting methods, base year efficiency, cost allocation, step changes and rates of escalation.

(2) Develop an alternative estimate of an appropriate operating expenditure allowance, based on the findings of the review.

(3) Assess Aurizon Network’s proposed expenditure against the QCA alternative estimate, in aggregate, and:

   (a) if the difference is not material, approve the proposed allowance

   (b) if the difference is material, reject the proposed allowance and substitute it with the QCA's alternative estimate.

[302] Aurizon Bulk, sub. 56: 1–2.

[303] Aurizon Network provides below-rail services to both coal-carrying and non-coal carrying train services (including regional passenger services, general freight, grain and livestock haulage, among other services). However, the allowable revenues and reference tariffs are specified only for coal-carrying train services in the 2017 DAU.

Figure 13 QCA's operating expenditure assessment approach

Review Aurizon Network's proposal	QCA estimate of reasonable costs	Assessment & decision
Is the forecasting method reasonable?	Develop QCA alternative estimates of reasonable expenditure at relevant category levels.	Compare QCA alternative aggregate allowance with Aurizon Network's proposal.
Is the base year cost efficient?	Estimate a reasonable aggregate operating cost allowance for the UT5 period.	Determine materiality of any difference between proposal and QCA estimates, with regard to s. 138(2) factors.
Are costs allocated appropriately?		If difference is not material, approve Aurizon Network's proposed allowance.
Are proposed step changes reasonable?		If difference is material, reject Aurizon Network's proposed allowance and substitute QCA alternative.
Are proposed escalation rates reasonable?		

Aurizon Network used a base-step-trend approach to develop the key components of its UT5 operating cost forecast. In the QCA's view, this method should be used to establish a reasonable operating expenditure allowance within which Aurizon Network can prudently and efficiently operate its business for the duration of a regulatory period. The base-step-trend approach involves determining an appropriate base year level of recurrent costs, applying escalations, incorporating material step changes in efficient costs, and recognising expected productivity improvements, where appropriate.

In developing its preliminary views, the QCA reviewed Aurizon Network's proposed incremental step changes and found some of them to be appropriate. Those that we considered to be not appropriate were considered to be either already accounted for in the base year actual expenditure, or not sufficiently substantiated.[304] The QCA also introduced a negative step change to reflect projected savings from productivity initiatives that were identified by Aurizon Network, but not included in its expenditure forecasts.

In its March 2018 submission, Aurizon Network challenged the QCA's assessment approach. Aurizon Network said that efficiencies and productivity improvements were already incorporated into its expenditure proposal, and it considered the QCA's operating expenditure allowance was effectively a clawback of anticipated savings.[305] Aurizon Network also submitted

[304] Where Aurizon Network subsequently provided further evidence to justify these step changes, the QCA has considered this in reaching its decision.
[305] Aurizon Network, sub. 40: 155.

that the QCA's approach was not well aligned with the policy intent of incentive-based regulation.[306] Aurizon Network said:

> We consider that the QCA's approach to assessing cost of services at a detailed incremental level and refusing incremental cost increases while returning anticipated incremental savings does not adequately incentivise the Network business to aggressively identify opportunities for operational efficiencies, nor does it allow it to manage its exposure to market volatility or regulatory risk.[307]

Aurizon Network also noted the views of the Productivity Commission, which said that incentive regulation should include:

> a linkage between the strength of the incentives and the level of confidence regulators have in their forecasts of efficient spending (the more accurate the forecast the stronger the incentive can be).[308]

The QCA agrees with the Productivity Commission's statement. Aurizon Network does not currently face a continuous incentive to reveal efficient costs through the regulatory framework, for example an efficiency sharing mechanism. Until such time as Aurizon Network faces appropriate incentives, a detailed examination of costs is the primary tool available to the QCA in determining whether proposed operating expenditure allowances are appropriate to approve, having regard to the factors at s. 138(2) of the QCA Act. We note Aurizon Network's suggestion that:

> Alternately, the cost allowance should be set at a broader level, allowing Aurizon Network to manage its cost structure within that allowance. This would involve recognition that some 'cost savings' will actually be redirected to new initiatives, and not all passed onto users.[309]

The QCA would be favourably disposed to considering such an approach in future pricing periods, and would welcome a proposal from Aurizon Network that includes appropriate incentives to pursue and reveal efficient costs. The QCA considers an appropriate incentive framework, which provides some confidence in the efficiency of revealed costs, is an important precursor to setting expenditure allowances at a broader level.

Adopting such an approach would also call for a revision to the role of step-changes within the base-step-trend forecasting method.

In the QCA's view, forecasting expenditures using the base-step-trend approach should not primarily be an exercise in identification and recovery of actual incremental business-as-usual costs and savings, or be applied as a supplementary pass-through mechanism to recover actual costs. In this regard we note Aurizon Network's acknowledgement that:

> Incentive regulation effectively seeks to establish upfront an efficient allowance for a bundle of costs, and then provides for the regulator to step away from the process. If additional costs are actually incurred in providing the services, these are borne by the regulated business, but similarly if they can achieve productivity improvements and reduce costs, they retain the benefit.[310]

The QCA agrees with this general premise. However, Aurizon Network's proposed use of step changes to recover relatively modest increments in business-as-usual costs (such as individual FTE resources) does not appear to reconcile with this view of incentive regulation.

[306] Aurizon Network, sub. 40: 150.
[307] Aurizon Network, sub. 40: 150.
[308] Productivity Commission 2013, in Aurizon Network, sub. 40: 154.
[309] Aurizon Network, sub. 40: 164.
[310] Aurizon Network, sub. 40: 154.

While the QCA has considered the basis for Aurizon Network's proposed step changes, we have not applied a rigid materiality test in this review. This recognises that Aurizon Network's base-step-trend method was only quite recently introduced and, more importantly, that efficient costs will continue to be revealed. However, continuing to consider step changes at the level of detail proposed by Aurizon Network will not advance the objectives of the incentive-based approach to regulation, as advocated by Aurizon Network, and supported by the QCA.

In future assessments, the QCA will place greater emphasis on the drivers of proposed step changes and the materiality of associated incremental costs. Specifically, we are minded to limit our consideration of step changes to incremental costs that are:

- necessary to fulfil new, or changed, binding statutory or regulatory obligations; and
- a reasonable estimate of the efficient incremental costs of fulfilling the new, or changed, binding statutory or regulatory obligation; and
- not funded through other components of the expenditure allowance or other aspects of approved allowable revenues; and
- of sufficient materiality such that the costs could not reasonably be met by an efficient entity operating within business-as-usual budget constraints, through prudent prioritisation of expenditures, or be otherwise mitigated.

Efficient costs

Section 138(2)(a) of the QCA Act requires that we have regard to the object of Part 5 of the QCA Act, namely to promote the economically efficient operation, use of, and investment in the CQCN.

Section 138(2)(g) of the QCA Act requires that we have regard to certain pricing principles. These include s. 168A(a) which states that the price for access to the service should generate expected revenue for the service that is at least enough to meet the efficient cost of providing access to the service and include a return on investment commensurate with regulatory and commercial risks involved.

In broad terms, we consider, pursuant to s. 138(2)(b) of the QCA Act, that the legitimate business interests of Aurizon Network in relation to operating expenditure allowances will be advanced if it is permitted to recover at least the efficient costs of operating and managing the CQCN.

We also consider that the public interest, and the interests of access seekers and access holders, are advanced by ensuring that Aurizon Network is allowed to earn sufficient revenue to provide the services demanded by customers, to the standard and quality required by customers, and to charge prices that reflect the efficient costs of doing so.

Aurizon's Network's transformation program

The Aurizon group has embarked on a program of transformation that has delivered operating cost savings to the group, including the Aurizon Network business. Aurizon Network said that the focus of the transformation program has been to improve workforce productivity and reduce discretionary spending.[311]

Aurizon Network said that savings of $57 million in Aurizon group corporate costs from transformational activities were achieved during 2013–14 and 2014–15, driven by reduced

[311] Aurizon Network, sub. 1: 207.

labour and professional service costs, rationalisation of property, and improved procurement practices.[312]

Aurizon Network noted that it expects further savings of $60–$80 million in corporate areas between 2015–16 and 2017–18, driven by restructures within shared support functions, as well as consolidation and rationalisation of real estate.[313] However, not all savings realised at the Aurizon group level will directly flow to the Aurizon Network business.

The QCA understands that further cost saving measures and structural changes are to be implemented during the UT5 pricing period, including:

- transitioning to a new organisational structure, effective from 1 July 2017
- exit from the intermodal business.[314]

These, and other, changes will likely have an impact on overall costs and staff numbers for the Aurizon group, resulting in changes to allocated corporate overheads and therefore the efficient level of operating expenditure. It is likely that these impacts will continue to emerge during the course of the UT5 pricing period. As such, the full impacts of the ongoing restructuring program cannot be fully considered in this investigation.

Nonetheless, in its March 2018 submission, Aurizon Network proposed revisions to its operating expenditure forecast as a result of structural changes that occurred upon the commencement of the UT5 pricing period. The QCA has considered these proposed revisions (section 7.6.3) and the impact of expected transformation savings in its assessment of an efficient operating expenditure allowance, where relevant (section 7.6.4).

Benchmarking

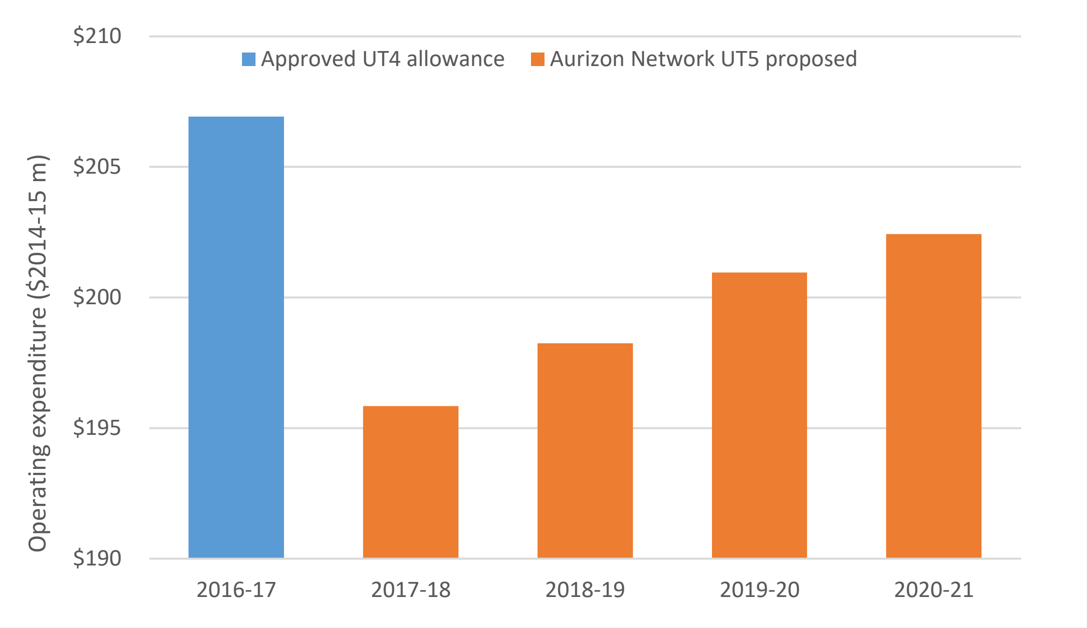
Some stakeholders called for the QCA to consider benchmarking when assessing Aurizon Network's proposed operating costs.[315]

The QCA has considered comparator benchmarks, where relevant, to inform its assessment of some elements of Aurizon Network's operating expenditure proposal. However, benchmarking of operating costs for an entity like Aurizon Network has limitations. In any case, the QCA considers that the efficiencies realised by the Aurizon group and Aurizon Network in recent years—and the ongoing program of transformation—demonstrate that the business is actively seeking to improve efficiency and productivity with regard to operating expenditure.

As illustrated in Figure 14, the proposed operating costs in each year of the UT5 pricing period are lower (in both real and nominal terms) than the approved allowances in the final year of the UT4 period. Aurizon Network's total proposed operating cost allowance for the UT5 pricing period is also lower in real terms than the approved total UT4 allowance.[316]

[312] Aurizon Network, sub. 1: 220.
[313] Aurizon Network, sub. 1: 221.
[314] Aurizon Network 2017d: 2–3.
[315] Anglo American, sub. 18: 11–12; QRC, sub. 21: 47, 49; QRC, sub. 53: 23–24.
[316] Total operating expenditure excluding electric traction energy costs, which are passed through at cost.

Figure 14 Aurizon Network's proposed UT5 operating expenditure and its UT4 allowed operating expenditure ($2014–15 m)



Allocation of costs

When considering the allocation of costs, in addition to having regard to s. 138(2)(b) of the QCA Act, we have also had regard to s. 137(1A)(b). Section 137(1A)(b) applies to Aurizon Network as a 'related access provider', namely an access provider that not only owns or operates the declared service, but also provides, or proposes to provide, access to the service to itself or a related body corporate. Section 137(1A)(b) requires that Aurizon Network's access undertaking must include provisions for preventing Aurizon Network from recovering, through the price of access to the service, costs that are not reasonably attributable to the provision of the service.

An appropriate allocation of costs is important for two reasons. Firstly, Aurizon Network provides some services, and undertakes some activities, that are not reasonably attributable to providing access to below-rail services. As a general principle, costs associated with these activities should not be recovered through below-rail access charges.

Secondly, Aurizon Network provides access to the declared service for non-coal carrying train services. Access for non-coal traffic is still provided subject to Aurizon Network's access undertaking. Some of the efficient costs of providing access to the CQCN should be allocated to non-coal carrying train services, and therefore should not be recovered through allowable revenues and reference tariffs for coal-carrying train services.

Figure 15 illustrates the separation of Aurizon Network's costs for the purposes of establishing reference tariffs and allowable revenues for coal-carrying trains.

Figure 15 Allocation of operating costs to Aurizon Network's allowable revenues

In taking this approach to allocating costs, resulting reference tariffs and allowable revenues should include the efficient costs of providing access to below-rail services for coal-carrying trains.

Consultant review

To assist in its assessment, the QCA engaged AECOM Australia Pty Ltd (AECOM) to review Aurizon Network's proposed system-wide and regional costs and corporate overhead expenditure forecasts and models.[317] AECOM's review was informed by extensive information requests issued to Aurizon Network, as well as in-person interviews with key Aurizon staff. The QCA has had regard to AECOM's analysis and recommendations in making its decision, however AECOM's advice has been treated as informative to the QCA's decision, rather than deterministic. In a number of cases, the QCA has formed views that differ to those expressed by AECOM, or has adopted a different approach. AECOM's reports are available on the QCA's website.[318]

The QCA notes that some stakeholders considered that Aurizon Network's submission did not contain enough information for them to form views on the proposed expenditure.

During the course of the investigation, further information was requested from, and supplied by, Aurizon Network. This significant additional information has informed our assessment.

[317] Costs associated with risk and insurance, and transmission costs have been assessed by the QCA.

[318] Values and recommended adjustments identified in AECOM's reports are expressed in real 2015–16 dollar terms. The QCA's conclusions in this chapter are expressed in nominal terms using our estimates of CPI and WPI inflation, unless otherwise stated.

While this information is not in all cases directly referred to in our analysis, we have considered it in making our decision.[319]

7.5 System-wide and regional costs

Aurizon Network's proposal

System-wide and regional costs account for around 55 per cent of Aurizon Network's proposed total operating expenditure over the UT5 pricing period.[320] Aurizon Network said that these costs relate to three primary functions:

- Network Control, Safe Working and Operations—controlling the movement of trains, light engines and track machines, and the safe working of these vehicles as they traverse the rail infrastructure
- Infrastructure Management—managing the performance of assets required to deliver the declared service, including the safety, reliability and availability of the rail infrastructure
- Business Management—performing the commercial, regulatory, financial and legal tasks required to operate a regulated below-rail business.[321]

Aurizon Network proposed system-wide and regional operating costs (excluding corporate overheads and external costs) of $69.4 million in 2017–18, increasing to $75.3 million in 2020–21. The total proposed allowance over the UT5 pricing period is $289.9 million, which Aurizon Network said is 23 per cent higher than the UT4 allowance, in nominal terms.

Table 36 presents a breakdown of Aurizon Network's proposed system-wide and regional operating costs by category for the UT5 pricing period.

Table 36 Aurizon Network proposed system-wide and regional costs ($m)

Category	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*UT5 total*
Network Control, Safe Working and Operations	29.70	30.63	31.54	32.42	124.28
Infrastructure Management	18.29	18.74	19.19	19.66	75.88
Business Management	21.38	21.96	23.22	23.19	89.75
Total	**69.37**	**71.33**	**73.95**	**75.27**	**289.91**

Source: Aurizon Network operating cost models.

Totals may not add due to rounding.

Each of the three primary expenditure categories comprises one or more activities or 'cost centres'. For example, the Business Management category includes a number of commercial-related cost centres, as well as the Network Finance, Network Legal and Regulation cost centres. In total, 28 cost centres are represented in the system-wide and regional operating cost forecast.

For some cost centres, Aurizon Network allocated less than 100 per cent of the identified costs to allowable revenues. This allocation reflects that some cost centres capture expenses incurred

[319] Aurizon Network has claimed confidentiality over much of this material.

[320] Excluding electricity transmission connection costs and electric traction energy costs.

[321] For more information on the roles and responsibilities of these functional areas (see Aurizon Network sub. 1: 339–344).

in performing functions that either do not relate to the provision of below-rail services, or relate to below-rail services provided to non-coal-carrying train traffic.[322]

Aurizon Network proposed some changes in its approach to estimating system-wide and regional costs that depart from the approaches approved by the QCA for the UT4 pricing period. Specifically:

- Network Finance and Network Legal costs have been categorised as direct costs within the Business Management category, rather than corporate overheads (allocated to below-rail services at 100 per cent and 90 per cent respectively).
- Two per cent of costs relating to the Network Train Operations cost centre are deducted to reflect non-coal traffic (and are not included in reference tariffs and allowable revenues for coal-carrying train services), relative to a 9 per cent deduction applying in UT4.
- Step increases in expenditures are proposed for the Network Train Operations function, for network control training and the implementation of the new' Advanced Planning and Execution' (APEX) system.
- Fifty per cent of costs relating to the 'Major Projects' function have been included in the forecast allowance. These costs were not included in the UT4 expenditure forecasts.
- Costs relating to the 'Network Regulation' cost centre have been 100 per cent allocated to below-rail services for coal-carrying traffic, compared with a 90 per cent allocation applying in UT4.

QCA analysis and assessment

When assessing Aurizon Network's proposed system-wide and regional operating costs, we have had regard to the factors set out in s. 138(2) of the QCA Act.

While the QCA has assessed as appropriate the majority of Aurizon Network's proposed system-wide and regional operating costs for the UT5 pricing period, we do not consider all elements of Aurizon Network's proposal to be appropriate to approve, having regard to the factors in s. 138(2) of the QCA Act.

Our analysis and assessment of Aurizon Network's proposed system-wide and regional costs follow below.

7.5.1 Forecasting method

Aurizon Network's proposal

Aurizon Network used a base-step-trend forecasting approach to estimate both its system-wide and regional operating costs, and corporate overheads. Aurizon Network's forecasting approach involves the following general process:

- Select a base year actual cost (Aurizon Network proposed to use 2014–15).
- Identify the actual costs incurred in the base year and remove costs not attributable to the declared service.
- Remove one-off and non-recurrent items from the base year actual costs.
- Further assess the base year expenditure to ensure it reflects efficient costs.

[322] In Aurizon Network's forecast model, these allocation rates were applied to the base year expenditure prior to base year adjustments, step changes and real cost escalation.

- Apply real cost escalations (for example, wage and price inflation) and step changes to estimate expenditure for each year of the UT5 pricing period.
- Apply step changes in costs where necessary.

This process is applied to each of the identified cost centres to develop the overall forecast for system-wide and regional operating costs.

QCA analysis and assessment

The base-step-trend forecasting approach relies on establishing an efficient level of baseline annual expenditure, which is then adjusted for known step changes in efficient costs over the regulatory period and changes in the general level of costs over time (trends).

Base-step-trend forecasting is generally less complex than other forecasting methods. However, to produce reliable forecasts of efficient costs, it relies on an efficient and representative base year cost, as any inefficiencies or inaccuracies in the base year cost will be carried through to forecast regulatory allowances for the term of the regulatory period.

A common alternative to base-step-trend forecasting is a 'bottom-up' method. This involves deriving the estimated cost of providing the declared service using forecasts of outputs produced, inputs required and the costs of those inputs. Hybrid forecasting approaches may also be used, which take on characteristics of both bottom-up and base-step-trend methods.

The QCA considers Aurizon Network's base-step-trend forecasting method is an appropriate basis for developing operating expenditure forecasts and is supported by regulatory precedent. We consider Aurizon Network's application of this approach below.

7.5.2 Choice of base year

Using a base-step-trend forecasting methodology requires an efficient base level of expenditure to be established. The starting point for this exercise is to select a recent year of expenditure that represents an appropriate estimate of future efficient expenditure. The base year costs may be derived from an entity's actual historical costs, an efficient bottom-up estimate, an approved regulatory allowance or other cost benchmark, or some combination of these.

Once a representative year of costs is selected, the costs should be examined to ensure they are a reasonable reflection of efficient recurrent costs. One-off and non-recurrent costs should be removed from the base cost and adjustments made for identified efficiencies, where appropriate.

Aurizon Network's proposal

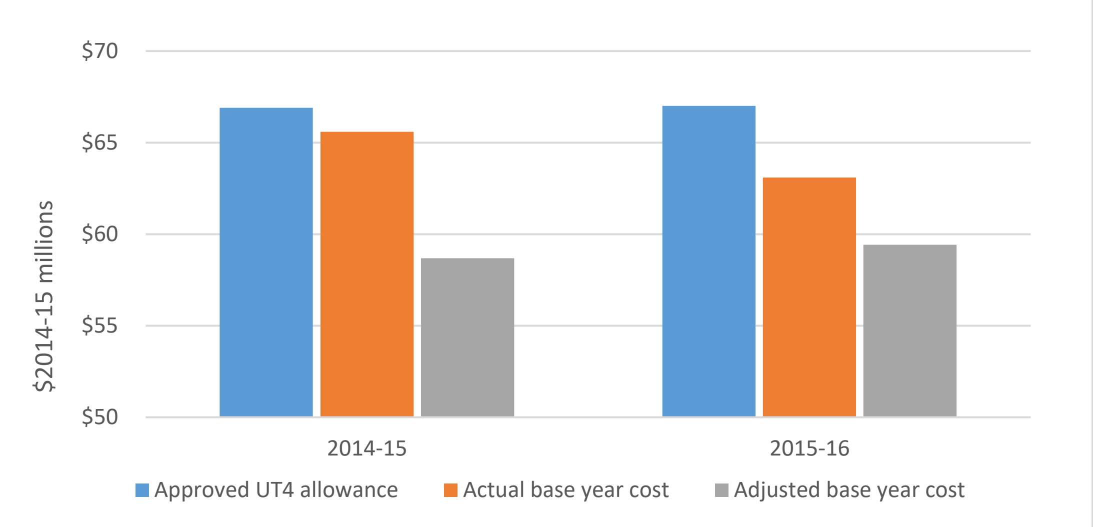
Aurizon Network proposed to use 2014–15 actual costs as baseline expenditures for its UT5 system-wide and regional operating expenditure forecast. The QCA understands 2014–15 was selected, as full-year cost data for the most recent complete year (2015–16) was not available when Aurizon Network was preparing its 2017 DAU submission.

Aurizon Network applied a number of adjustments to its 2014–15 actual costs to reflect efficiencies and non-recurrent costs. These adjustments primarily relate to labour cost savings due to restructures, non-recurrent non-labour costs and transfers of costs to other categories (corporate overheads and maintenance costs).

During the QCA's investigation, full-year actual cost information for 2015–16 became available. The QCA subsequently requested updated operating expenditure forecasts from Aurizon Network, using actual 2015–16 costs as the base year.

Figure 16 sets out Aurizon Network's 2014–15 and 2015–16 actual costs, and adjusted base year costs, compared with the corresponding approved UT4 allowances. To allow a like-for-like comparison, the UT4 approved allowances have been restated to include costs of the Network Finance and Network Legal functions, which were captured in the corporate overhead allowance in UT4 and are within the system-wide and regional cost forecast for UT5.

Figure 16 Aurizon Network's actual and adjusted base year system-wide and regional costs ($2014–15 m)



Based on Aurizon Network's proposed allocation rates.

Source: Aurizon Network operating cost models; QCA analysis.

Aurizon Network's 2015–16 operating cost model included an adjustment to each cost centre representing the difference between employee cash bonuses paid in 2015–16 and 2014–15. Aurizon Network said this adjustment was made because the level of bonuses paid during 2015–16 was abnormally low. In total, the proposed adjustment to the 2015–16 base year cost is around $2 million. This matter is discussed below.

QCA analysis and assessment

Some stakeholders did not accept the use of Aurizon Network's actual historical costs as the basis for UT5 expenditure forecasts. The QRC disagreed with Aurizon Network's view that the QCA should focus on the submitted operating cost forecasts rather than the results of benchmarking exercises. The QRC noted Aurizon Network has an incentive to overstate costs and considered that greater emphasis should be placed on benchmarking to establish efficient allowances.[323]

Anglo American said efficient costs should be those required to meet Aurizon Network's access obligations and not those arbitrarily escalated from UT4 costs.[324] However, it did not oppose the proposed approach of 'locking in' a base year, provided it is appropriate and sufficiently robust.[325]

Aurizon Network has underspent against its approved UT4 operating cost allowance in recent years and realised cost savings, which is reflected in its proposed actual base year costs. We note that Aurizon Network has further adjusted its actual base year costs to remove non-

[323] QRC, sub. 21: 47.
[324] Anglo American, sub. 18: 11; sub. 57: 7.
[325] Anglo American, sub. 57: 7.

recurrent costs and incorporated identified labour cost efficiencies. Aurizon Network's adjusted base year system-wide and regional costs are lower than the QCA approved UT4 allowances, when adjusted to include Network Legal and Network Finance costs that were previously treated as corporate overheads.

The QCA considers that the efficiencies realised by the Aurizon group and Aurizon Network in recent years—and the ongoing program of transformation—demonstrate that the business is moving toward improved efficiency and productivity with respect to its operating costs. The QCA is encouraged by the Aurizon group's recent efficiency gains, and considers this indicative of an organisation moving closer to the efficient frontier with regard to its operating costs.

For these reasons, and in the absence of any evidence to indicate that Aurizon Network's adjusted base year operating costs are inefficient or materially overstated, the QCA considers them a reasonable basis for developing the system-wide and regional operating cost forecast. Nonetheless, if Aurizon Network proposed to adopt actual historical costs as baseline operating costs for future undertaking periods, the QCA would be minded to require that those expenditures be independently audited prior to submission to the QCA.

In general, if using actual historical costs as baseline costs, the QCA considers it generally appropriate to use the most recent data available, where possible. In its draft decision, the QCA expressed a preliminary view that it would be appropriate to use Aurizon Network's actual 2015–16 system-wide and regional costs for developing forecasts for the UT5 pricing period, once adjusted for non-recurrent costs and identified efficiencies.[326] AECOM also recommended that 2015–16 costs be adopted as the base year expenditures for both system-wide and regional costs, and corporate overheads. Aurizon Network and the QRC generally accepted the use of 2015–16 base year costs.[327] The QCA considers 2015–16 costs remain an appropriate basis for Aurizon Network’s operating cost forecasts for the UT5 pricing period.

Nonetheless, the QCA does not consider Aurizon Network's proposal to adjust the 2015–16 base year cost to the level of 2014–15 actual cash bonus costs is appropriate. A review of Aurizon Network's recent bonus expenses reveals that costs incurred in 2014–15 were around 55 per cent higher than those incurred in 2013–14, and around 110 per cent higher than those in 2015–16.[328] In our view, cash bonus costs incurred in 2014–15 were anomalous. Aurizon Network acknowledged that bonuses paid in 2014–15 were high compared with prior years, however it restated that 2015–16 bonuses were not an appropriate baseline.[329]

Aurizon Network reviewed its cash bonus expenses for 2012–13 to 2015–16 and suggested that the average value over this period be included in the 2015–16 base year cost.

The QCA does not consider it appropriate to depart from the base year approach in favour of an averaging approach, in this instance. Aurizon Network’s stated reason for adopting an average value is to minimise the impact of significant one-off adjustments.[330] However, the QCA notes that this rationale could equally apply to a range of other cost categories that demonstrate a similar, or greater, degree of year to year variation. It is not clear to the QCA why an exception should be made for these particular costs.

[326] This decision has implications for a number of Aurizon Network's proposed step-changes and base-year adjustments for non-recurrent costs, which are discussed in the relevant sections below.
[327] Aurizon Network, sub. 40: 155; QRC, sub. 53: 24.
[328] Based on total bonus costs, before allocation.
[329] Aurizon Network, sub. 40: 158.
[330] Aurizon Network, sub. 40: 158.

The QCA sought further information from Aurizon Network which demonstrates that actual bonus costs in the most recent available financial year (2016–17) were not significantly different to the 2015–16 base year costs.[331] This suggests that 2015–16 bonus costs, while lower than the four-year average suggested by Aurizon Network, are not an unreasonable estimate of future costs. AECOM formed a similar view and maintained the position expressed in its 2017 report.[332]

The QCA is not persuaded that the recent historical variation in bonus costs is sufficient to justify a base year adjustment in this case. We do not consider that an average would necessarily offer a better estimate of an appropriate level of these costs over the UT5 pricing period. As such, we have excluded Aurizon Network's proposed adjustment and retained cash bonus amounts at the level revealed in the 2015–16 base year costs. The QCA considers this an adequate allowance for short-term cash incentives.

The QCA is of the view that, where Aurizon Network’s management and board choose to award cash bonuses in excess of this allowance, these costs should be borne by the company and its shareholders.

7.5.3 Allocation of costs

In assessing whether the proposed system-wide and regional costs are efficient, the QCA has had regard to the extent to which the proposed costs would be reasonably required in providing below-rail services on the CQCN.

In addition to providing access to the CQCN below-rail service, Aurizon Network also provides services that do not directly relate to this function and should not necessarily be funded through reference tariffs for coal-carrying trains. Examples of functions and costs that do not relate to the declared service include:

- rail infrastructure management and train control services for privately-owned and operated rail spurs
- land leases to customers of corridor land and land owned by Aurizon Network
- design, scope and standard reviews of connecting infrastructure
- rail relocation and related construction and maintenance services (for private spurs and loops)
- transfer facilities licences regarding load-out interface requirements, load profiling, dust veneering and other matters Aurizon Network has sole authority over.[333]

Furthermore, Aurizon Network provides below-rail services to both coal-carrying and non-coal-carrying train services (including regional passenger services, general freight, grain and livestock haulage, among other services). However, the allowable revenues and reference tariffs are specified only for coal-carrying train services in the 2017 DAU.

Aurizon Network's proposal

Aurizon Network's proposed system-wide and regional cost forecasts are derived using allocations of Aurizon Network's total direct costs, as set out in Table 37.

[331] 2016–17 bonus costs were less than 3 per cent higher than 2015–16 costs.
[332] AECOM, 2018: 6–7.
[333] QCA 2016c, Volume I — Governance and access: 56–57.

These allocations reflect Aurizon Network's views on the proportion of total Aurizon Network direct costs that relate to the provision of below-rail services. In the case of Network Train Operations[334] costs, the allocation represents the proportion of costs that Aurizon Network considers relate to providing train control services to coal traffic.

Table 37 Aurizon Network's proposed cost allocations to below-rail services

Functional area/cost centre	*UT4 allocation (%)*	*Proposed UT5 allocation (%)*
Network Regulation	90	100
Network Finance	n/a (treated as corporate overhead)	100
Network Legal	n/a (treated as corporate overhead)	90
Network Control, Safe working and Operations (excl. Network Train Operations)	100	100
Network Train Operations	91	98
Commercial Development (Except Major Projects)	90	90
Major Projects	0	50
Infrastructure Management	100	100
Network Operations Management	100	100
Infrastructure (asset maintenance and mechanised production)	0	0
EVP Network	0	0

Source: Aurizon Network, sub. 1; 201–202; Aurizon Network system-wide and regional operating cost model.

QCA analysis and assessment

In considering an efficient allocation of direct costs for the provision of below-rail services, we have had regard to the extent to which the proposed costs would be reasonably incurred in providing below-rail services, and then the extent to which those costs relate to providing below-rail services to coal-carrying trains on the CQCN.

Figure 15 summarises the general separation of Aurizon Network's services, and how the QCA considers costs of providing these services should be generally allocated. This illustrates the distinction between below-rail services, and provision of below-rail services to coal-carrying trains.

We note that, with the exception of Network Train Operations costs, it is not clear that any of the allocated amounts expressly include a deduction for activities that relate to non-coal access. Notwithstanding Aurizon Network's statement that costs related to 'non-regulated' activities such as non-coal train services are excluded from the operating expenditure proposal,[335] the QCA has not been able to verify how non-coal allocations for other cost categories have been estimated and reflected in Aurizon Network's operating cost forecasts.

[334] Aurizon Network's expenditure model identifies this cost centre as 'Network Control'.
[335] Aurizon Network, sub. 1: 204.

This section discusses our analysis and assessment of appropriate allocations of direct costs to below-rail services, and the further allocation of costs to non-coal traffic, where appropriate.

Below-rail services allocations

Aurizon Network has made deductions to its direct costs for a number of functional areas in recognition of activities that do not relate to the provision of below-rail services. The QCA's analysis and assessment of these deductions are discussed below.

Business Management

Network Finance and Network Legal

Aurizon Network included its Network Finance and Network Legal cost categories as direct costs within the Business Management function. In UT4, these costs were recovered through the allocated corporate overhead allowance.

Aurizon Network's Network Finance group is responsible for billing, budgets, forecasting and preparing financial and statutory reports.[336] The Network Legal team provides legal advice on matters pertinent to Aurizon Network in relation to the supply of below-rail services.[337] Aurizon Network submitted that these functional areas are part of the Aurizon Network legal entity, independent from the legal and finance functions of Aurizon Holdings.

Anglo American questioned why these costs had been shifted to direct costs and whether the reduction to corporate overheads was commensurate with the increase in direct costs as a result.[338]

The QRC did not object to the re-categorisation of these costs in principle; however, it expressed concerns regarding transparency of how the responsibilities of these functional areas are allocated between the regulated and non-regulated business. The QRC said was it was not clear whether Aurizon Network had increased the proportion of these costs borne by the regulated business and considered that the proposed allocations were not substantiated.[339]

In its February 2017 submission, Aurizon Network said that the proposed treatment of Network Legal and Finance costs for UT5 results in an average cost saving of $1.6 million per annum, relative to the QCA’s UT4 final decision.[340]

AECOM's review concluded that treating these costs as direct costs was reasonable. AECOM also reviewed Aurizon Network's operating expenditure models and confirmed that the costs had been transferred appropriately between overhead and direct costs with no evidence of double counting.[341] The QCA agrees with AECOM's assessment and considers that the re-categorisation of these cost from overheads to direct costs is appropriate, given that these functional areas perform activities almost solely for Aurizon Network.

The allocation of Network Legal costs includes a 10 per cent deduction in recognition of the non-regulatory activities undertaken in this area, consistent with the UT4 deduction applied in 2016–17. We consider this is generally a reasonable means of allocating these costs to below-rail services, as the first stage of allocation to allowable revenues.

336 Aurizon Network, sub. 1: 202.
337 Aurizon Network, sub. 1: 202.
338 Anglo American, sub. 18: 11–12.
339 QRC, sub. 21: 48.
340 Aurizon Network, sub. 26: 20.
341 AECOM 2017b: 14.

In contrast, Aurizon Network proposed that Network Finance costs for the UT5 pricing period be fully allocated to below-rail service on the basis that the responsibilities of the team are directly attributable to the provision of access to the CQCN for coal-carrying train services.[342] In UT4, Aurizon Network applied a deduction to these costs to reflect a contribution to non-regulated activities.[343] Aurizon Network said that allocating 100 per cent rather than 90 per cent of Network Finance costs is offset by excluding a corporate overhead allocation for 'Group Accounting, Planning and Reporting' team costs that would otherwise be attributed to Aurizon Network.[344]

AECOM concluded that there was some overlap between the functions of Network Finance and those of Group Accounting, Planning and Reporting and considered it reasonable that the costs for the latter are not included in the operating expenditure for UT5.[345] Nonetheless, AECOM did not consider it reasonable to allocate 100 per cent of Network Finance costs to allowable revenues. AECOM formed the view that the Network Finance team is responsible for a number of financial functions across the whole Aurizon Network business. AECOM further noted:

> As Aurizon Network’s costing manual outlines, the ‘costs of Finance, Regulation and Commercial by their nature predominantly relate to Below Rail Services. As timesheets are not kept to record time spent on various activities, an allocation to Other Services will be made based on % of revenue for Other Services compared to revenue for Below Rail Services.’ [346]

The QCA considered it likely that some portion of the Network Finance group's activities would relate to non-regulated activities undertaken by Aurizon Network. Our preliminary view was that an allocation of 90 per cent, consistent with the allocation applied in UT4, would be appropriate.

Aurizon Network disagreed with our position and said that a 10 per cent allocation implies that 2.4 FTE within the Network Finance group are solely dedicated to non-regulated activities, which it considered an unreasonable inference.[347]

Aurizon Network subsequently undertook a review of its Network Finance function to identify staff involved in non-regulated activities, so that the proportion of time spent on regulated and non-regulated activities could be identified. Based on this analysis, Aurizon Network suggested an alternative allocation of 2.8 per cent, representing the weighted average of Network Finance FTEs identified as being involved in non-regulated activities.[348]

The QCA considers that Aurizon Network's revised analysis, while only an estimate, represents at least an attempt to reasonably attribute costs and derive an allocation for non-regulated activities undertaken by the Network Finance team. Based on the information available, AECOM also considered the revised approach is reasonable and reflects a stronger causal driver of costs than the previously proposed revenue allocators.[349]

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[342] Aurizon Network, sub. 1: 342.
[343] Deduction based on the ratio of non-regulated revenue to total Aurizon Network revenue, each year. The deduction in 2016–17 was 10 per cent (See Aurizon Network 2013a: 209–210).
[344] Aurizon Network, sub. 1: 343.
[345] AECOM 2017b: 13.
[346] AECOM 2017b: 13–14.
[347] Aurizon Network, sub. 40: 162–163.
[348] Aurizon Network, sub. 40: 162–163.
[349] AECOM 2018: 3.

Major Projects

Aurizon Network's proposed UT5 expenditure includes an allocation of 50 per cent of the total costs of the Major Projects cost centre. Aurizon Network's UT4 expenditure forecasts did not include an allocation of these costs. The Major Projects team is a small group within the 'Network Commercial' team and is involved in activities such as:

- development of SUFA
- commercial negotiations and execution of contracts for new expansions
- providing support relating to the process for network development, planning, studies and expansions
- preparing submissions and responses in regard to regulatory activities (SUFA and UT4).[350]

Aurizon Network said that Major Projects team costs have been included due to the team's involvement in regulatory processes such as the development of a SUFA. Aurizon Network said that the 50 per cent allocation represents the proportion of work undertaken on regulated activities.[351]

Some stakeholders were critical of including an allocation of Major Projects in the operating cost allowance. Anglo American and QRC noted the Major Projects team undertakes activities that do not relate to regulated below-rail services and expressed concerns that users are being asked to subsidise those activities.[352]

Anglo American considered that including an operating expenditure allowance for Major Projects costs would result in double counting, as these costs would be capitalised and included in Aurizon Network's annual capital expenditure claims.[353]

The QRC also said there is no evidence that the Major Projects group will continue to dedicate 50 per cent of its time or costs to regulated activities during the UT5 pricing period.[354] The QRC said that it appeared inconsistent to claim that 50 per cent of the Major Projects group's activities relate to regulated below-rail services, given that Aurizon Network is not planning any major new expansion projects in the UT5 pricing period.[355] The QRC also expressed disappointment at the outcomes of the SUFA development process and questioned whether the ongoing costs of the Major Projects group’s involvement in SUFA can be considered efficient. The QRC submitted that the cost allowance for the Major Projects team should be reduced by an estimate of the costs attributable to Aurizon Network's participation in UT5 SUFA processes.[356]

The QCA considers that recovering reasonable costs associated with development of a user funding agreement is in the legitimate business interests of Aurizon Network, and the interests of access seekers and access holders, irrespective of whether the process to date has met the expectations of stakeholders. As noted in Chapter 18, the QCA proposes to rely on a negotiate-arbitrate framework and, potentially non-binding arbitration guidelines, and will monitor the user funding arrangements during the course for the UT5 undertaking period. As such, it would

[350] Aurizon Network, sub. 1: 202; sub. 26: 20.
[351] Aurizon Network, sub. 1: 217.
[352] Anglo American, sub. 18: 12–13; QRC, sub. 21: 48.
[353] Anglo American, sub. 18: 12–13.
[354] QRC, sub. 21: 48.
[355] QRC, sub. 21: 48.
[356] QRC, sub. 53: 24.

not be appropriate to make an adjustment to the proposed allowance as suggested by the QRC, at this time.

AECOM formed the view that the roles of the Major Projects team are specifically related to the provision of access and concluded that an allocation of these costs to operating expenditure is reasonable. However, AECOM noted that some costs for the Major Projects team may be capitalised given their involvement in capital project development, and it would be unreasonable to allocate the full amount of these costs. AECOM concluded:

> In accordance with the Aurizon Group cost capitalisation policy, project costs should be mostly considered operating expenditure in the concept and pre-feasibility stage. We consider that the 50% cost allocation to operating expenditure, as proposed, is reasonable.[357]

The QCA agrees with AECOM's assessment. While it would be inappropriate to allocate all of these costs to the operating expenditure allowance, it is likely that some allocation is appropriate, based on the activities undertaken by this team.

On balance, the QCA considers that an allocation of 50 per cent of Major Projects team costs to below-rail services is not unreasonable. This recognises that some of these costs would be either capitalised or otherwise not related to providing access to the declared service. While the allocation assumption is not based on a rigorous or transparent method, we are prepared to accept this allocation given the relatively modest magnitude of the total costs to be recovered in this instance.

Network Regulation

Aurizon Network stated that its Network Regulation team is not expected to undertake any activities that are not related to the regulated below-rail network during the UT5 regulatory period.[358] On this basis, the full cost of this functional area was allocated to the operating cost allowance.

The QRC questioned why the Network Regulation team would no longer be involved in unregulated activities.[359] In its collaborative submission, Aurizon Network submitted:

> Within Part 3 of UT4, Aurizon Network must at all times employ a regulatory affairs advisor, compliance officer and not outsource any regulatory function to any other part of the Aurizon Group.
>
> These obligations, the extensive compliance program within the Access Undertaking and responding to complex stakeholder and QCA requests regarding any future enhancements to the Access Undertaking, make any work outside of the scope of the Access Undertaking difficult for the Regulatory team. For this reason, 100% of the Network regulation costs are included within the Operational Allowance.[360]

The QRC submitted that, to the extent that the Network Regulation team costs include costs relating to 'inappropriate DAAUs which were subsequently withdrawn or not approved', then an adjustment should be made.[361] The QCA considers that an adjustment of this nature is not appropriate in this instance, and would not be in the legitimate business interest of Aurizon Network, under s. 138(2)(b) of the QCA Act.

[357] AECOM 2017b: 15.
[358] Aurizon Network, sub. 1: 344.
[359] QRC, sub. 21: 48.
[360] Aurizon Network, sub. 26: 20.
[361] QRC, sub. 53: 24.

AECOM considered it is reasonable to allocate 100 per cent of regulation costs to below-rail services, based on the information before it.[362] AECOM did not express a view on whether this cost should be entirely recovered from reference tariffs for coal-carrying train services.

On balance, and based on the Network Regulation team activities identified by Aurizon Network, the QCA considers that the full allocation of these costs to below-rail services is reasonable, when considered in the context of Aurizon Network's overall operating cost proposal, and taking into account the QCA's adjustments to the proposed forecasts outlined in this chapter.

Infrastructure Management

Aurizon Network said the core objective of the Infrastructure Management function is to maximise the performance and reliability of Aurizon Network’s rail infrastructure through engineering solutions, for the lowest whole of life cost, while maintaining safety.[363] Aurizon Network said its Infrastructure Management functions include activities that are directly related to the provision of access to customers, including development of standards for track, electrical, telecommunications and signalling, asset maintenance and renewals planning and execution, maintenance strategies, plans and programs.[364] These costs are fully allocated to below-rail services.

Aurizon Network noted that costs associated with non-regulated and capital activities (for example, Rail Infrastructure Management costs associated with privately owned infrastructure) are captured through timesheets and recorded in separate cost centres and are excluded from the operating expenditure proposal.[365]

On balance, the QCA considers that Aurizon Network's Infrastructure Management costs are predominantly related to below-rail services and the proposed allocation appears reasonable.

Network Control, Safe Working and Operations

Aurizon Network said these costs are required to manage the safety, reliability and availability of Aurizon Network’s rail infrastructure. The teams within this group are responsible for:

- network control and scheduling
- operations planning and management
- maintenance planning
- incident management
- closure planning, command and control
- performance reporting and analytics.[366]

Aurizon Network has fully allocated these costs to below-rail services for coal-carrying trains, with the exception of Network Train Operations costs, which attract a two per cent proposed deduction for non-coal activity, as discussed below.

Based on the nature of the activities undertaken by these functional areas, the QCA considers it reasonable that the majority of these cost are directly attributable to the provision of access to

[362] AECOM 2017b: 15.
[363] Aurizon Network, sub. 1: 340.
[364] Aurizon Network, sub. 1: 201.
[365] Aurizon Network, sub. 1: 214.
[366] Aurizon Network, sub. 1: 207–208, 339–340.

below-rail services. On this basis, Aurizon Network's proposed allocation to below-rail services (before deductions for non-coal activity) appears reasonable.

Allocations for non-coal activities

As discussed above, the costs attributable to providing below-rail services can be further allocated between coal-carrying and non-coal-carrying train services. After determining costs attributable to the declared service, an allocation to non-coal traffic, reflected as a deduction to the cost allocated to allowable revenues recovered through reference tariffs for coal-carrying trains, may be considered.

The QCA considers it appropriate that Aurizon Network recover the majority of its system-wide and regional costs through allowable revenues and reference tariffs for coal-carrying train services. Nonetheless, we consider that an efficient allocation of costs would have regard to the contribution that non-coal carrying train services make to the costs of operating the CQCN. Access charges for non-coal train services are within the scope of the access undertaking as they use the declared service.

Aurizon Network proposed an explicit non-coal deduction to its Network Train Operations cost category only.

Network Train Operations

Aurizon Network proposed an allocation of 2 per cent of total Network Train Operations costs in recognition that some of these resources are utilised in delivering train control services to non-coal traffic on the CQCN.

Aurizon Network also proposed a 2 per cent allocation during the UT4 investigation based on its estimate of FTEs required for non-coal train control services, after initially proposing a 9 per cent allocation based on non-coal train kilometres.

In considering this issue during the UT4 investigation, the QCA concluded that a 2 per cent deduction was not reflective of the train control costs attributable to non-coal traffic. The QCA considered that Aurizon Network's proposal, which used proportion of non-coal train kilometres as the allocator, was more likely to reflect the resources used by Aurizon Network in providing this service to non-coal customers, given train control costs are a function of scheduling and the time spent on the track.[367] The QCA's decision for the UT4 pricing period was to allocate 91 per cent of Aurizon Network's Train Control Centre (Network Train Operations) costs to coal traffic (that is, a 9 per cent allocation to non-coal traffic).

Aurizon Network said that the 9 per cent allocation applied in UT4 was excessive and materially overstated the incremental costs associated with managing non-coal traffic on the CQCN and, as a result, Aurizon Network was not appropriately compensated for the efficient costs of delivering these services during the UT4 pricing period.[368] Aurizon Network argued that a lower allocation is appropriate because non-coal train services:

- do not require dedicated network control boards or control centre labour resources
- run on less than 4 per cent of network track kilometres
- operate as timetabled traffic and are subject to minimal rescheduling

[367] QCA 2016c, Volume IV — Maximum Allowable Revenue: 49.
[368] Aurizon Network, sub. 1: 210.

- have declined in absolute and proportional volume terms in recent years.[369]

Aurizon Network also said that:

- passenger train movements are prioritised, and coal traffic requires more interaction with network control to accommodate passenger trains movements
- using train kilometres as an allocator does not take into account the impact of closures for maintenance and on-track vehicles, and does not consider cancellations and rescheduling.[370]

Aurizon Network submitted that a 2 per cent allocation is adequate based on the fact that non-coal train services represent less than 2 per cent of total gtk railed.[371]

Anglo American and the QRC expressed concerns with the reduced non-coal allocation.[372] The QRC considered that the proposed allocation of these costs to coal services was inappropriately high and would result in coal access services cross-subsidising non-coal access services.[373] The QRC said:

> While it may be true that no dedicated resources are provided for non-coal traffic in the network control centre, there is clearly activity which would not be being conducted in the absence of the passenger or freight services. Given issues like statutory passenger priority under the Transport Infrastructure Act 1994 (Qld), the QRC finds it hard to believe that such services only take 2% of the available resources. The QRC also considers it is likely that the time (and costs) involved in managing non-coal train services will be well in excess of the proportion of GTK railed (given issues like their special needs and lower gross tonnage per service), such that this is not a reasonable basis for making allocations of this cost category (and even an alternative basis like numbers of train paths would be likely to result in an insufficient allocation to non-coal services).[374]

In its collaborative submission, Aurizon Network maintained that the costs associated with providing network control services to non-coal carrying trains are negligible. Aurizon Network said the change of deduction from 9 per cent to 2 per cent increases Aurizon Network's base MAR by approximately $1.3 million per annum, or approximately $0.005 per net tonne, at the proposed volume forecast for 2017–18.[375]

AECOM considered this matter and formed the view that Network Train Operations costs are a function of train kilometres rather than tonnages moved. AECOM noted that this allocation approach is consistent with that used by ARTC, which said:

> Train Km is chosen as the most appropriate causal allocator as the network controllers interact with trains as they travel across the territory covered by the control board. Therefore the number of trains and the distance travelled (hence Train Km) is a better measure as a causal allocator rather than say any relationship to the size of the train.[376]

AECOM reviewed historical train kilometres on the CQCN, which revealed a relatively stable split between coal and non-coal services of approximately 88 per cent and 12 per cent respectively in 2015–16. AECOM added that there is no fundamental change in train paths from

369 Aurizon Network, sub. 1: 209–211.
370 Aurizon Network, sub. 1: 210–211.
371 Aurizon Network, sub. 1: 211.
372 Anglo American, sub. 18: 12; QRC, sub. 21: 47.
373 QRC, sub. 21: 47.
374 QRC, sub. 21: 48.
375 Aurizon Network, sub. 26: 20.
376 ARTC 2016: 11.

the UT4 pricing period and forecast across the UT5 pricing period, and considered that an 88 per cent allocation for coal-carrying traffic is appropriate and reasonable.[377]

In the draft decision, the QCA expressed a preliminary view that an allocation based on the proportion of non-coal train kilometres was more likely to reasonably reflect the resources used by Aurizon Network in providing train control services to non-coal train operators, given these costs are a function of scheduling and the time spent on the track. The QRC supported this approach.[378]

Aurizon Network disagreed with the QCA's proposed use of train kilometres as an allocator for these costs, submitting that non-coal train services operate as time-tabled traffic and are subject to minimal rescheduling. Aurizon Network subsequently provided additional data revealing the time spent on track for the major types of traffic, and suggested that this metric should form the basis of the non-coal deduction. This data is set out in Table 38.

Aurizon Bulk also disagreed with the use of train kilometres as an allocator. It argued this approach does not account for significant seasonal fluctuations experienced by the agricultural sector. Aurizon Bulk added that assessing the level of non-coal train activity in a single year will not necessarily reflect future activity due to factors including drought, which affect the amount of non-coal commodities railed, for example grain.[379]

Table 38 Time spent on track – Aurizon Network's coal and non-coal traffic

Time on network	*Unit of measurement*	*2013–14*	*2014–15*	*2015–16*	*2016–17*	*Average*
Coal	hours	375,885	391,495	384,272	376,050	
	% of total	92.7	90.7	89.8	89.2	90.6
Maintenance	hours	7,418	19,340	24,148	25,324	
	% of total	1.8	4.5	5.6	6.0	4.5
Non-coal	hours	21,975	20,671	19,442	20,229	
	% of total	5.4	4.8	4.5	4.8	4.9

Source: Aurizon Network, sub. 40: 160.

Aurizon Network noted that the proportion of non-coal traffic has declined in recent years, with the exception of 2016–17, when it was influenced by Tropical Cyclone Debbie. Aurizon Network suggested that the data be averaged over a four-year period to avoid any bias as a result of selecting a single year.[380] Based on this, Aurizon Network suggested a non-coal deduction of 4.9 per cent for Network Train Operations costs. Aurizon Network also provided 'Vizirail' system data which indicates that scheduling changes for non-coal traffic have amounted to less than 4 per cent of total scheduling changes in recent times.[381]

AECOM reviewed the revised data and method suggested by Aurizon Network in its March 2018 submission and considered 'time spent on track' to be a reasonable metric for determining an

[377] AECOM 2017b: 16.
[378] QRC, sub. 53: 24.
[379] Aurizon Bulk, sub. 56: 2.
[380] Aurizon Network, sub. 40: 160.
[381] Aurizon Network, sub. 40: 160; Aurizon Network, Response to QCA request for information #96, 30 April 2018.

allocation for Network Train Operations costs. AECOM also considered that adopting the suggested four-year average historical value of time spent on track was reasonable.

Nonetheless, AECOM noted that Aurizon Network had included the impact of maintenance trains in the denominator of its revised allocator calculation, which reduces the non-coal allocation. AECOM considered that maintenance trains are necessary for the operation of the whole network and that maintenance activities apply to both coal and non-coal services. As such, it recommended the 'time spent on track' calculation be amended to remove maintenance trains from the denominator, which results in revised time spent on track allocator of 5.1 per cent.[382]

The QCA reviewed the data provided by Aurizon Network, and AECOM's analysis, and considers that 'time spent on track' is a reasonable metric to apply and is likely to represent a more robust measure than train kilometres. We agree with AECOM's view that maintenance trains should be excluded from the calculation. On this basis, we consider that a non-coal allocation of 5.1 per cent should apply to Aurizon Network's Network Train Operations costs, resulting in the recovery of 94.9 per cent of these costs from reference tariffs for coal-carrying trains, as derived in Table 39 below.

Table 39 QCA assessment – Derivation of non-coal allocations for Network Train Operations

Time on network	*Unit of measurement*	*2013–14*	*2014–15*	*2015–16*	*2016–17*	*Average*
Coal traffic	hours	375,885	391,495	384,272	376,050	381,925
Non-coal traffic	hours	21,975	20,671	19,442	20,229	20,579
TOTAL (excl. maintenance)	hours	397,860	412,166	403,714	396,279	402,505
Coal traffic	% of time spent on track	94.5	95.0	95.2	94.9	94.9
Non-coal traffic	% of time spent on track	5.5	5.0	4.8	5.1	5.1

Source: Aurizon Network, sub. 40: 160; QCA and AECOM analysis.

Totals may not add due to rounding.

Non-coal allocations—other costs

Based on Aurizon Network's submission, Network Train Operations is the only cost category attracting an explicit allocation to non-coal traffic on the CQCN. However, it is generally unclear which costs are explicitly included in, or excluded from, Aurizon Network's allocated costs, and whether the allocations applied are intended to exclude costs that relate to below-rail services provided to non-coal carrying trains.

Aurizon Network's submission and responses to information requests characterised these allocations in various ways. For example, in reference to the 10 per cent deductions applied to selected Business Management costs, Aurizon Network said:

> [U]nless otherwise outlined … non-coal cost allocations have been set at 10% for all years of UT5, which is consistent with the QCA approved rate for FY2017.[383]

It also said:

[382] AECOM 2018: 5.

[383] Aurizon Network, sub. 1: 216.

> [C]ommercial costs have been reduced by 10% to reflect the Commercial team's involvement in some non-regulated activities. This is consistent with the non-coal cost reduction applied by Aurizon Network in FY2017, which was approved by the QCA in the UT4 final decision.[384]

Aurizon Network also described the costs generally excluded from allowable revenues as:

> related to non-regulated activities such as non-coal train services. For clarity, such costs are excluded from the operating expenditure proposal, are not included in the MAR, and Reference Tariffs do not recover any part of them.[385]

The above descriptions imply that these allocations recognise allocations for non-coal activity.

In contrast, also in reference to the 10 per cent deduction to selected Business Management costs, Aurizon Network noted:

> A portion of Aurizon Network's annual revenue is earned from non-regulated activities, which supplement the revenue recovered through regulated reference tariffs. In recognition of this, Aurizon Network has excluded a portion of its forecast operating expenditures when calculating its regulated revenue allowance and reference tariffs. In its final decision on the UT4, the QCA approved a 10% allocation for FY2017, representing the proportion of non-regulated revenue to total revenue. Aurizon Network has applied a 10% deduction consistently across all years of the UT5 regulatory period.[386]

The allocation applied in UT4 was based on the ratio of total revenue earned from below-rail services, to total Aurizon Network revenue. The QCA understands that total below-rail revenue includes revenue from non-coal access, which implies that an allocation based on this metric does not specifically recognise revenue from non-coal access in the allocated amounts.

The QCA sought to confirm whether allocations for non-coal below-rail costs had been applied elsewhere or by other means. Aurizon Network advised that:

> By applying deductions to its operating cost proposal for the UT5 regulatory period, Aurizon Network recognises that some Aurizon Network staff will perform tasks which are not solely attributable to the provision of the declared service, e.g. non-coal train services.
>
> It is difficult to isolate costs that relate solely to these activities when those costs are inextricably linked to the costs of regulated activities. This is particularly relevant to labour costs when time records are not kept to be able to apportion costs.
>
> In its UT4 Final Decision, the QCA approved Aurizon Network's proposal to reduce its budgeted costs for specific cost centres in FY2017 by 10%: a rate which reflected the percentage of non-regulated revenue as a portion of total Aurizon Network revenue. Where appropriate, Aurizon Network has maintained the deductions for the UT5 regulatory period.[387]

Based on the information before it, the QCA formed a preliminary view in its draft decision that deductions for costs associated with providing access to the declared service for non-coal traffic are unlikely to be fully recognised in these general allocations, or allocations of other cost categories, with the exception of Network Train Operations. The QRC considered it likely that this was the case but noted that:

> …while no transparent allocation to non-coal services has been proposed, it may be the case that Aurizon Network has reduced some of its claims to reflect the impact of non-coal services, and then allocated 100% of the remaining cost to coal services.

[384] Aurizon Network, sub. 1: 217.
[385] Aurizon Network, sub. 1: 204.
[386] Aurizon Network, sub. 1: 201–202.
[387] Aurizon Network, Response to QCA request for information #76, 25 September 2017.

> However, based on the information provided by the QCA, it appears more likely that any such deductions reflect the cost of non-regulated activities, rather than non-coal activities, which would mean that the resulting cost still needs to be allocated between coal and non-coal (both of which are regulated).[388]

The next issue to consider is whether Aurizon Network ought to explicitly recognise an allocation for non-coal below-rail services in allocating other costs, if it has not already done so.

In the case of Network Train Operations costs, Aurizon Network argued that the resources required to provide network control services to non-coal-carrying trains are minimal and do not create any incremental costs.[389] While this may be true, it is clear that non-coal-carrying trains use Aurizon Network's train control services and therefore derive some benefit from them, regardless of whether they give rise to incremental costs. As discussed above, Aurizon Network makes a deduction to the costs allocated to the allowable revenues in recognition of this.

While this non-coal traffic allocation applies only to Network Train Operations costs, it could be argued that this logic applies to other categories of costs that are reasonably incurred in the provision of below-rail services, specifically where:

- costs relate to activities and resources that provide identifiable services to non-coal traffic, or
- non-coal traffic otherwise derives some benefit from the functions being undertaken.

The Network Regulation team is an example of a function that is partially and indirectly involved in non-coal access. Aurizon Network has submitted that its Network Regulation team is not expected to undertake any activities that are not related to the regulated below-rail network during the UT5 pricing period.[390] However, allocating 100 per cent of Network Regulation costs to coal-carrying train services fails to recognise that non-coal-carrying train services are also beneficiaries of the regulatory framework required to be prescribed within an approved access undertaking, and this is predominantly an output of the Network Regulation team. For example, access to the below-rail service for non-coal-carrying train services may be provided subject to the terms of the Standard Access Agreement and Standard Train Operations Deed, which are products of the approved Access Undertaking. The QRC also submitted that an allocation of Network Regulation costs to non-coal services is appropriate, given that non-coal services derive benefit from most sections of the undertaking.[391]

On this basis, it could be argued that Network Regulation costs should be more transparently shared by all above-rail operators, to the extent that they access the CQCN in accordance with an approved access undertaking and benefit from the regulatory protections it provides. Moreover, a similar reasoning might justify a non-coal allocation of operating costs incurred in other functional areas, to ensure that non-coal traffic is not unreasonably subsidised by coal traffic.

The QCA notes that the Australian Energy Regulator (AER) has considered similar issues in the context of electricity distribution and transmission networks, where shared assets are used to provide both regulated and unregulated services. To recognise this, the AER applies a reduction

[388] QRC, sub. 53: 24–25.
[389] Aurizon Network, sub. 1: 209–210.
[390] Aurizon Network, sub. 1: 217.
[391] QRC, sub. 53: 24.

to regulated revenues where unregulated revenues earned from shared assets exceed a defined materiality threshold.[392]

In the draft decision, the QCA's preliminary view was to defer applying a general non-coal allocation of other operating costs on the basis that recognising and allocating non-coal costs is an issue not limited to Aurizon Network's operating costs. Therefore, we considered the matter ought to be considered in the context of costs incurred more broadly by Aurizon Network. This preliminary position was also in part due to the implications of Aurizon Network's ongoing process of corporate restructuring and the implications that continues to have for the efficient allocation of costs.

As an interim step, the QCA proposed that Aurizon Network transparently document its allocations and identify how is has accounted for an appropriate attribution to non-coal below-rail activities for operating costs other than Network Train Operations. With the exception of non-coal allocations relating to Network Train Operations costs, Aurizon Network did not provide any further justification or comment on this matter in response to the QCA's draft decision.

The QRC disagreed with the QCA's preliminary view and submitted that, in the absence of Aurizon Network demonstrating that an adjustment is already reflected in its claim, it would be appropriate to make an adjustment.[393]

The QRC also submitted that the QCA should undertake a holistic assessment of how Aurizon Network's RAB, operating costs and maintenance costs are calculated to fairly reflect the impact of non-coal services.[394] In relation to operating costs, the QRC said:

> …the QCA should consider how those costs have been calculated and allocate those costs including as between coal and non-coal services consistent with that method of calculation (and not that portion of capacity that has been reserved for non-coal services).[395]

In contrast, Pacific National argued that the CQCN is primarily a coal network and the costs of its maintenance and operation should be borne by users conducting coal operations.[396] Aurizon Bulk also expressed concerns that increasing the allocation of costs to non-coal services could result in unintended consequences. It submitted that any significant increase in costs to non-coal customers could prompt substitution toward road transport, bringing with it economic and community costs due to increased truck traffic and road maintenance requirements.[397]

After considering the information before it, including stakeholder submissions, the QCA considers that a broader review of the attribution of costs to non-coal users of the declared service is warranted in future processes. However, we are also of the view that Aurizon Network's proposed approaches to allocating costs are unlikely to, in all cases, appropriately reflect costs incurred in providing access to the declared service for non-coal carrying traffic. In recognition of this, the QCA considers it appropriate to apply a general, but conservative, non-coal allocation of the overall operating cost allowance.[398]

[392] AER 2013a: 6.
[393] QRC, sub. 53: 24–25.
[394] QRC, sub. 65: 7–8.
[395] QRC, sub. 65: 7–8.
[396] Pacific National, sub. 66: 6.
[397] Aurizon Bulk, sub. 56: 2.
[398] Some specific exclusions have been applied, as discussed in section 7.11.

The QCA has determined this general allocation based on the proportion of actual non-coal below-rail access charge revenue to total below-rail access charge revenue, as reported by Aurizon Network. The calculation and application of this non-coal allocation is illustrated in section 7.11.

Going forward, the QCA suggests that a broader review of allocation of costs to non-coal services is needed, including, but not limited to, operating expenditures. This review would aim to establish an allocation approach that transparently identifies costs and efficiently shares them between coal and non-coal traffic, where such sharing is appropriate and reasonable.

QCA assessment

The QCA has some concerns regarding Aurizon Network's conceptual basis for allocating system-wide and regional costs to allowable revenues and reference tariffs for coal-carrying train services. In particular, we have concerns that the allocations applied by Aurizon Network may lead to an operating expenditure allowance that overstates the cost of its 'regulated' activities by failing to include explicit and transparent allocations to reflect an appropriate share of costs incurred in providing below-rail access to non-coal carrying trains. In recognition of this, the QCA has applied a general, but conservative, non-coal allocation of overall operating costs, as discussed in section 7.11.

In developing our alternative estimate of system-wide and regional operating expenditure, the QCA considers it appropriate to make two adjustments to Aurizon Network’s proposed allocation rates, specifically:

- Network Finance costs have been allocated at a rate of 97.2 per cent, based on data provided by Aurizon Network in its March 2018 submission.
- Network Train Operations costs have been allocated at a rate of 94.9 per cent, derived using the proportional ‘time spent on track’ data supplied by Aurizon Network in its March 2018 submission.

The QCA has not sought to adjust other allocation rates proposed by Aurizon Network. While we do not necessarily endorse the allocation rates applied by Aurizon Network, we consider they result in reasonable allocations of system-wide and regional costs, after taking into account the QCA's other adjustments to the proposed forecasts outlined in this chapter, including the general allocation for non-coal traffic.

While we are prepared to accept most of the allocation rates as proposed at this time, the QCA suggests it would be in Aurizon Network’s interests to demonstrate transparent and considered approaches to estimating its allocations in future undertaking proposals, should it seek to recover these costs from reference tariffs. Doing so would give the QCA some degree of confidence in the appropriateness of the proposed costs, and potentially allow a lighter-handed investigative and approval process for operating expenditure forecasts.

Alternatively, the QCA suggests that a broader allocation approach be considered that makes a general adjustment for non-coal traffic and non-regulated activities at the total allowable revenue level. Such an approach could consist of:

- approval of an *ex ante* total allowable revenue, prior to any deductions for costs associated with non-regulated and non-coal services (as they are distinct and separate issues)
- adjustment of the *ex ante* total allowable revenue to exclude indicative revenues from non-regulated and non-coal services to establish the allowable revenue and reference tariffs for coal-carrying traffic only

- an *ex post* reconciliation of allowable and actual revenues from non-regulated and non-coal services, and appropriate adjustments to approved revenues and reference tariffs for coal-carrying train services.

Such an approach could encourage a transparent recognition of costs that are not attributable to providing access to the declared service for coal-carrying trains. This, in turn, would largely remove the need for detailed scrutiny of allocation parameters at the cost centre level, and could also provide a means to address pricing uncertainty for non-coal train services, which stakeholders have raised as a concern.[399] This approach would also ensure that Aurizon Network can still recover at least the efficient costs of providing access to the declared service.

7.5.4 Step changes

Once base year costs have been adjusted to reflect an efficient level of recurrent expenditure, consideration should be given to factors that may change that base level of expenditure during the regulatory period, other than real cost escalation (section 7.10). These adjustments are described as step changes, and represent incremental increases or decreases in expenditure from the efficient base year costs.

Aurizon Network's proposal

Aurizon Network's proposed step changes for the UT5 pricing period are summarised in Table 40. These proposed adjustments were predicated on using 2014–15 actual costs as the efficient cost base.

Table 40 Aurizon Network's proposed step changes during the UT5 pricing period

Proposed step-change	*Cost category*	*Aurizon Network rationale*	*Incremental cost (UT5 total)*
APEX system costs	Network Control, Safe Working and Operations	Additional support and maintenance costs associated with the implementation of the first phase of APEX, which is an integrated operational planning, scheduling, and real-time traffic management tool.	$7.48 m commencing in 2017–18
Network control school costs	Network Control, Safe Working and Operations	Additional allowance to conduct annual network controller training for up to 12 trainees to address impending skill shortages during the UT5 pricing period due to retirement.	$3.15 m commencing in 2017–18
Commercial Planning and Development - additional FTEs	Business Management	Increase in costs to account for the additional obligations imposed by the QCA in the UT4 final decision (for example, baseline capacity assessment, strategic train plan, consultation obligations for the development and associated review of the baseline capacity assessment, system operating parameters and the network development plan).	$2.1 m commencing in 2017–18
Commercial Planning and Development—professional advisory services	Business Management	As above.	$2.04 m commencing in 2017–18
Condition-based assessment	Business	Estimated cost to undertake condition-based	$0.65 m in 2019–20

[399] Pacific National, sub. 19: 22.

Proposed step-change	*Cost category*	*Aurizon Network rationale*	*Incremental cost (UT5 total)*
costs	Management	assessment, as required by the 2017 DAU.	
Manager, Permanent Way	VP Network Operations	Cost to employ an engineering manager responsible for the supervision and maintenance of track and associated ballast and equipment in the Goonyella and Newlands Systems.	Commencing in 2017–18 [400]

Note: Step change for Manager, Permanent Way was not identified in Aurizon Network's 2017 DAU submission.

Based on Aurizon Network's 2014–15 base year operating expenditure forecast model.

Aurizon Network's 2015–16 operating cost model included a number of additional step changes that were not identified in its original proposal. These step changes are set out in Table 41.

QCA analysis and assessment

The QCA and AECOM reviewed the proposed step changes and found them to be generally appropriate. The QRC generally accepted the QCA’s preliminary positions on the proposed step changes.[401]

Nonetheless, in the QCA’s view, applying the base-step-trend forecasting approach should not be an exercise in the identification and recovery of actual incremental 'business-as-usual' costs.

While the QCA has considered the need for Aurizon Network's proposed step changes, we have not applied a rigid materiality test to the associated costs. However, we are minded to do so in future, once Aurizon Network's base-step-trend forecasting approach is well established and we have greater confidence that efficient costs are being revealed.

In future reviews the QCA is minded to limit its consideration of step changes in costs to those that are material and uncontrollable, and unable to be reasonably funded by an efficient and prudent business operating within its budget constraints. The specific criteria against which the QCA is minded to consider future step changes are set out in this chapter.

As Aurizon Network proposed to use 2014–15 costs as base year costs, the QCA's decision to adopt 2015–16 as the cost base year removes the need to apply some of the proposed step changes. This is because a number of the proposed changes in costs are either fully, or partially, included in actual 2015–16 actual costs.

The QCA's assessment of each proposed step change is set out below.

Commercial planning and development

Aurizon Network proposed two step changes to its 2014–15 base year costs to comply with additional obligations included in the 2016 Undertaking such as baseline capacity assessments, strategic train planning, System Operating Parameters and the Network Development Plan. Aurizon Network proposed a step change in costs to reflect additional FTEs, and additional professional advisory services, which it considered necessary to meet these obligations.

Some stakeholders were critical of Aurizon Network's claim for additional costs of complying with additional regulatory obligations within its 2016 Undertaking.[402] Anglo American did not

[400] The QCA has not disclosed the value of this step change as it reflects an individual employee's remuneration.
[401] QRC, sub. 53: 25.
[402] QRC, sub. 21: 48; Anglo American, sub. 18: 11.

accept Aurizon Network's suggestion that compliance costs have increased.[403] The QRC considered that the UT4 compliance obligations were not onerous and would not require significant additional resources.[404]

Information provided by Aurizon Network indicated that 3.8 FTEs were added to the Commercial Planning and Development function during 2015–16 in response to additional workload arising from UT4 Undertaking obligations.[405] In its draft decision, the QCA formed a preliminary view that the cost of these resources would be reflected in the 2015–16 base year cost, and therefore no step change is required. Aurizon Network subsequently submitted that these FTEs were employed during the fourth quarter of 2015–16 and therefore the full-year cost was not captured in the 2015–16 base year.[406] The QCA and AECOM reviewed additional information and evidence provided by Aurizon Network and have verified this claim. Accordingly, the QCA accepts an adjustment to the 2015–16 base year cost to reflect the full-year cost of these 3.8 FTEs employed during the fourth quarter of 2015–16.

In doing so, the QCA considers that the associated increase in operating expenditure also provides Aurizon Network with sufficient recognition of additional reporting requirements outlined in this decision. In the QCA's view, the proposed step changes are appropriate, when considered in the context of Aurizon Network's overall operating cost proposal, and taking into account the QCA's other adjustments to the proposed forecasts outlined in this chapter.

With regard to additional costs for professional advisory services, AECOM considered that the costs incurred in the 2015–16 base year would already reflect the cost of consulting services needed to meet Aurizon Network's obligations. As such AECOM recommended that no further step change be included for these costs. Aurizon Network did not challenge this preliminary conclusion and Aurizon Network's updated operating cost model, provided in March 2018, excluded the step change for professional advisory services.

Manager—Permanent Way

Aurizon Network included a step change to reflect the cost to employ an engineering manager responsible for the supervision and maintenance of track and associated ballast and equipment in the Goonyella and Newlands Systems. This step change was not specifically identified in Aurizon Network's public submission.

AECOM considered this issue and concluded that the role is required as part of the restructuring of the Mackay and Rockhampton Network Control centres and Infrastructure Management responsibilities.

AECOM found that the role was established in 2016, and noted that the associated cost has been incorporated into the 2015–16 base year costs. Aurizon Network subsequently acknowledged this and accepted that a step change was not required in the 2015–16 model.[407] As such, the QCA has not included the proposed step change for this cost.

[403] Anglo American, sub. 18: 13.
[404] QRC, sub. 21: 47.
[405] Aurizon Network, Response to QCA request for information #21, April 2017.
[406] Aurizon Network, sub. 40: 165.
[407] Aurizon Network, sub. 40: 159.

Condition-based assessment

Aurizon Network proposed an allowance of around $0.6 million in 2019–20 as an estimate of costs incurred to conduct the condition-based assessment, as required by the 2017 DAU.[408] As discussed in Chapter 20 the QCA considers it appropriate to approve the proposed provisions within the 2017 DAU relating to condition-based assessments.

The QRC supported the inclusion of these costs, subject to QCA scrutiny as to whether those costs are efficient. The QRC said that it would expect these costs to decrease over time as Aurizon Network becomes more experienced with conducting such assessments.[409]

The QCA considers it appropriate to include an allowance for the estimated efficient costs of conducting the condition-based assessment. We also note that, where actual costs of the condition-based assessment differ from the forecast allowance, Aurizon Network is able to claim the difference through a revenue adjustment under Schedule F of its 2017 DAU.

Aurizon Network's proposed step change in 2019–20 was based on actual costs incurred in conducting the condition-based assessment in 2013, escalated to 2020 dollars. However, we note that a condition-based assessment was most recently completed in May 2017. We consider the cost of this more recent exercise is a better estimate of future efficient costs. Accordingly, the QCA considers it appropriate to include an allowance of $0.46 million in 2019–20, representing the actual cost of undertaking the 2017 condition-based assessment, escalated to 2019–20 dollars.

Network control school

Aurizon Network proposed an additional allowance for the annual 'network control school' training program. This course is a six-month program that trains around 10 applicants per year to become network train controllers. Aurizon Network said that the majority of network control school costs relate to labour costs of trainees and two existing Aurizon Network employees who conduct the training.

The QCA reviewed the business case for the proposed additional expenditure and considers the need has been reasonably justified. Aurizon Network expects a potentially critical FTE shortage within the Network Control function over the UT5 pricing period, driven in part by a significant proportion of existing controllers nearing retirement.[410] On this basis, the QCA considers that training of additional network controllers, above the business-as-usual level, is appropriate and prudent at this time.

Based on AECOM's analysis of Aurizon Network's expenditure models, the QCA formed the preliminary view that $0.65 million of the total proposed step change of $0.75 million was already incorporated into 2015–16 base year costs. Accordingly, the QCA's preliminary position was to include a step change of approximately $0.10 million per year from 2017–18 onwards for additional network train control school costs, representing the difference between the proposed step change and the cost already captured in the base year.

Aurizon Network submitted that the QCA incorrectly assumed $0.65m of these costs were included in the base year.[411] Aurizon Network submitted that, due to the network control

[408] These costs were separately identified by Aurizon Network in UT4 but have been included as part of the Business Management category for the 2017 DAU.
[409] QRC, sub. 21: 50.
[410] Aurizon Network, Response to QCA request for information #20, 16 March 2017.
[411] Aurizon Network, sub. 40: 161.

school being delivered across financial years, it had removed all costs associated with the school from the base year, before including the full cost of the school as a discrete step change.[412]

Based on clarification from Aurizon Network and AECOM's advice, the QCA acknowledges Aurizon Network's modelling approach and considers it appropriate to include a step change of $0.75 million in 2017–18, representing the full incremental step change as proposed. As network control school costs are incurred within the Network Train Operations function, the step change incorporates a discrete allocation of 5.1 per cent for non-coal traffic, as discussed in section 7.5.3.

APEX system costs

Aurizon Network's Advanced Planning and Execution (APEX) tool is a software solution to support faster and more responsive planning and scheduling of trains. The software is being implemented in three stages over the coming years.

Aurizon Network said that implementing the APEX tool has the potential to deliver efficiencies within the Network Planning function, increased network capacity and improvements to operational performance such as on-time arrival and network velocity.[413]

The APEX system is a significant capital investment, which was considered and approved by the QCA in its review of Aurizon Network's 2015–16 capital expenditure claim. The step changes proposed in each year of the UT5 pricing period reflect operating expenditure for ongoing support and maintenance of the system. The QCA considers it appropriate that these costs are included in the forecast operating cost allowance.

In its 2017 review of this expenditure item, AECOM identified that implementation of the APEX system has been delayed and the proposed support and maintenance costs would not be incurred until 2018–19.

In its March 2018 submission, Aurizon Network said that it had further revised the implementation timeline and contractual arrangements which brings forward some components of the APEX solution and associated costs.[414] The QCA sought further information from Aurizon Network to verify the revised contractual and implementation arrangements and revised cost schedule. AECOM and the QCA reviewed this documentation and consider it supports Aurizon Network's suggested revisions. Through the request for information process, Aurizon Network advised of further minor updates to the cost schedule provided in its March 2018 submission, which have been reflected in the QCA's decision.

The QCA notes that the APEX solution is expected to deliver benefits to customers and efficiencies for Aurizon Network. Specifically, in its report on Aurizon Network's 2015–16 capital expenditure claim, AECOM noted that a key objective of the investment in the APEX solution was to improve efficiency of decision making in day-to-day operations in the train control centre by replacing largely manual 'pen and paper' methods of recording train movements with interactive screen-based computer systems.[415] AECOM also noted the potential for financial benefits arising from the decommissioning of the ViziRail system and a reduction in day of operation losses.[416]

[412] Aurizon Network, sub. 40: 161.
[413] Aurizon Network, Response to QCA request for information #19, 16 March 2017.
[414] Aurizon Network, sub. 40: 162.
[415] AECOM 2017a: 44.
[416] AECOM 2017a: 44.

The QCA has had regard to the potential for operating cost savings arising from implementing the APEX system. Nonetheless, we have not sought to quantify or incorporate these into the operating cost allowance. We consider these are efficiency opportunities for Aurizon Network that, if realised, will be revealed in future base year costs.

Other step changes—2015–16 operating cost model

During the course of the investigation, the QCA asked Aurizon Network to provide updated expenditure models using actual 2015–16 costs. Aurizon Network's original forecasts accompanying its 2017 DAU were based on 2014–15 costs.

In reviewing Aurizon Network's 2015–16 operating expenditure model, AECOM identified six step changes in costs that were not noted in Aurizon Network's 2017 DAU submission or 2014–15 base year cost model. These step changes are set out in Table 41.

Table 41 Additional step changes identified in 2015–16 operating cost model

Proposed adjustment	***Cost category***	***Aurizon Network rationale***	***Incremental cost ($m)***
Network performance	Network Control, Safe Working and Operations	Planning and engagement resourcing.	$0.52 per year commencing in 2017–18
Network planning	Network Control, Safe working and Operations	Planning and engagement resourcing.	$0.37 per year commencing in 2017–18
Network customer service	Network control, Safe working and Operations	Planning and engagement resourcing.	$0.14 per year commencing in 2017–18
Safety management systems review	VP Network Operations	Requirement to review safety management systems.	$0.22 per year commencing 2017–18
Continuous improvement	VP Network Operations	Activities to optimise capital investment and improve operations.	$0.30 per year commencing 2017–18
Electrical specialist role	Commercial Development and Governance	Creation of a specialist role to engage in regulatory and policy processes regarding electricity wholesale and network issues.	Commencing in 2017–18

These changes were not identified in Aurizon Network's 2017 DAU proposal and were not initially substantiated in terms of need, scope or cost. In its draft decision, the QCA formed a preliminary view that it was not appropriate to include these step changes in the UT5 operating expenditure allowance. We expressed a view that, in the absence of any material and uncontrollable change in circumstances driving these proposed changes, these costs should be considered incremental business-as-usual expenses. The QRC agreed with this position.[417]

In its March 2018 submission, Aurizon Network accepted that the proposed step changes for the 'safety management system review' and 'continuous improvement' step changes could be

[417] QRC, sub. 53: 25.

deemed business-as-usual expenses.[418] However, it restated the need for the additional 'planning and engagement' resources and the 'electrical specialist' function. Aurizon Network acknowledged that while these costs may not be the direct result of an uncontrollable change, it considered the roles are necessary given the increased volumes and complexity of the below-rail business, and submitted that these functions are providing value to customers.[419]

With regard to the electrical specialist step change, Aurizon Network considered this internal expertise was needed to manage energy policy and regulation issues, as well as to pursue identified opportunities to reduce Aurizon Network's energy costs. Aurizon Network submitted that these cost savings will be directly passed through to CQCN customers and assist in managing asset stranding risk.[420]

In relation to incremental planning and engagement FTEs, Aurizon Network argued these resources were needed to 'meet operational requirements and ensure the teams were positioned to support the broader Network Operations business'.[421] Aurizon Network argued that the resourcing is 'intended to provide opportunities to achieve standardisation and to consolidate capabilities across the Network Operations function to more effectively leverage expertise and more clearly articulate areas of accountability and delivery'.[422] Aurizon Network identified the key objectives of these functions as:

- developing a planning framework that optimises track access to meet volumes throughput;
- flexibly managing market demand and network aging asset requirements;
- delivering a single, long-range, year-on-year plan to identify current and future access requirements across the four systems in the CQCN;
- delivering a single plan that integrates all work activities (renewals and maintenance) every time the track is taken; and
- providing a clear responsibilities for the Principal Contractor Work Health and Safety and Rail Safety Management during all Integrated Possession works.[423]

The QCA has made clear its views on the treatment of step changes within the base-step-trend forecasting method, including the criteria against which it proposes to consider them in future. While the QCA has concerns with considering step changes of this nature, we note that these resources have now been employed by Aurizon Network, but are not captured in the base year costs. We also note that these costs relate to activities that are expected to drive future cost and operational efficiencies. For these reasons, and based on the information before it, the QCA is prepared to accept these step changes for the UT5 pricing period in this instance.

The QCA has had regard to the potential for operating costs efficiencies arising from Aurizon Network's decision to commit these additional resources, and notes AECOM's suggestion that these costs be treated as a nil step change on the basis of expected offsetting savings during the UT5 pricing period.[424] Nonetheless, the QCA has not sought to quantify or incorporate these potential savings into the operating cost allowance. We consider any potential savings

[418] Aurizon Network, sub. 40: 164.
[419] Aurizon Network, sub. 40: 164.
[420] Aurizon Network, sub. 40: 165.
[421] Aurizon Network, sub. 40: 164.
[422] Aurizon Network, sub. 40: 164.
[423] Aurizon Network, sub. 40: 164–165.
[424] AECOM 2018: 14–15.

represent efficiency opportunities for Aurizon Network which, if realised, will be revealed in future base-year costs.

In future, the QCA would expect Aurizon Network to fund these types of costs from its overall operating cost allowance derived from revealed base year costs. To the extent that these incremental costs are efficiently incurred, we would expect them to be revealed in the assessment of efficient base year expenditures for subsequent access undertaking periods.

In future processes, the QCA intends to apply more stringent criteria in considering any proposed incremental step changes. Importantly, we do not intend to contemplate proposed step changes associated with incremental FTE and resourcing needs, except where there is strong justification for doing so. It should not be the QCA's role to form a view on the prudence and efficiency of individual resourcing decisions, or to dictate whether specific business management functions should, or should not, be undertaken by Aurizon Network.

In the QCA's view, continuing to assess step changes at this level of detail will not advance the objectives of the incentive-based approach to regulation that has been advocated by Aurizon Network, and supported by the QCA (section 7.4). Furthermore, considering relatively modest incremental increases in resourcing for specific functions does not necessarily take account of year to year variation in costs, or offsetting cost reductions that may be realised in other areas during the regulatory period.

Additional step change – Regulatory compliance professional services

In its March 2018 submission, Aurizon Network proposed to include a further one-off step change of $0.75 million in 2019–20 relating to expenditure for upcoming regulatory processes.[425] This expenditure was not included in Aurizon Network's UT5 expenditure proposal and the QCA did not express a preliminary view on the proposal. Aurizon Network submitted that the proposed step change reflects:

- $0.5 million in 2019–20 for legal and economic advice in preparing submissions to the QCA processes for re-declaration of the CQCN under the QCA Act, and the certification of Queensland's rail access regime.
- $0.25 million in 2019–20 for anticipated consultancy expenditure required to assist in preparation of its UT6 proposal, and responding to QCA assessments.

The QCA has not included the suggested step change of $0.5 million in 2019–20 for legal and economic advice relating to the CQCN declaration process and certification of the Queensland rail access regime.

The QCA notes that Aurizon Network participates in public consultation on various regulatory and policy processes such as these from time to time, including ACCC and AER determinations, as well as QCA investigations relating to other access providers and broader regulatory policy issues. While Aurizon Network may have strong commercial and strategic interests in the outcomes of these processes, its participation is largely discretionary. AECOM shared this view. In the QCA's view, engagement in these types of processes—while irregular in frequency and scope—is a business-as-usual activity for Aurizon Network. Costs attributable to these activities will be higher in some years and lower in others, however; the QCA considers the aggregate operating cost allowance determined in this decision sufficiently compensates Aurizon Network for engaging in these processes. Furthermore, the QCA expects that Aurizon Network would

[425] Aurizon Network, sub. 40: 165–166.

prudently prioritise expenditure as needed to advance its strategic and commercial priorities at any given time.

With regard to the suggested step change for anticipated consultancy expenditure for UT6 preparation, the QCA acknowledges that such costs are a legitimate expense for Aurizon Network. It is in Aurizon Network's legitimate business interests to have the opportunity to recover reasonable costs incurred in engaging in the DAU process, particularly as it has a statutory obligation to do so.

In considering whether Aurizon Network's suggested step change for UT6 preparation costs is reasonable, the QCA examined actual professional services costs incurred by Aurizon Network in each year from 2013–14 through to 2017–18 within the Network Regulation cost centre. Based on this analysis, 2015–16 base year costs for regulatory functions may be understated when compared with historical actual costs during periods of DAU development and consultation activity. The level of DAU engagement activity during 2015–16 (in the latter stages of the UT4 investigation) was relatively low when compared with other recent years reviewed. This is reflected in the lower actual costs of professional services incurred during the 2015–16 base year.

While the QCA does not express a view on whether the scope of activities and costs incurred is prudent or efficient, the QCA considers the suggested step change of $0.25 million in 2019–20 is reasonable when compared with historical actual costs. Accepting this step change, while modest, will ensure that Aurizon Network's total allowance for its regulation function is sufficient to meet statutory obligations associated with the UT6 access undertaking development and approval process.

Nonetheless, in future the QCA may conclude that such costs should be funded from the overall operating cost allowance and prudent prioritisation of expenditures, if necessary.

Additional step change – Permanent way development training

In its March 2018 submission, Aurizon Network submitted that the costs for Permanent Way included in the 2015–16 model are understated as a consequence of the QCA's use of a 2016–17 base year cost for the maintenance cost allowance. Specifically, Aurizon Network noted that around $1.7 million in training development costs captured under the Permanent Way development cost centre are no longer included in the maintenance allowance. Aurizon Network submitted:

> Given the Draft Decision adopts 2016–17 as the base year for maintenance, these costs are no longer included in the maintenance allowance and therefore Aurizon Network seeks to recover these costs through the opex allowance. The costs are separately identifiable and incurred in the permanent way development cost centre from 2016–17. Aurizon Network has included costs of $1.7m related to this training as an adjustment to the 2015–16 base year.[426]

The QCA sought further information from Aurizon Network, including recent historical actual costs incurred for Permanent Way development training. The QCA and AECOM reviewed the information and modelling provided by Aurizon Network and acknowledge that these costs are neither provided for in the 2015–16 operating cost base or the 2016–17 maintenance cost base. AECOM recommended that these cost be accepted.[427]

Based on its analysis, the QCA considers it reasonable to include an adjustment of around $1.9 million (nominal) in the 2015–16 base year operating cost in recognition of the Permanent Way

[426] Aurizon Network, sub. 40: 159.
[427] AECOM 2018: 18–19.

development training function that is no longer recovered through the maintenance cost allowance as a result of using 2016–17 as the base year for maintenance costs. We note that Permanent Way development training costs have declined in recent years and the suggested adjustment to bring the base cost to 2016–17 levels is considered reasonable, reflecting the savings Aurizon Network has made in recent years.

Aurizon Network also advised that a portion of its identified transformation savings for corporate initiatives had been revised, noting that these savings will now accrue to Aurizon Network in full, rather than being shared across the corporate cost base (section 7.6.4). Aurizon Network proposed that these revised savings be removed from the corporate cost allowance and reflected in the system-wide and regional operating cost forecast under the Permanent Way development training cost centre, where the savings will ultimately be realised.

The QCA and AECOM have verified the proposed revised savings and consider Aurizon Network's suggested approach is reasonable. Accordingly, the QCA's decision on a reasonable step change for Permanent Way development training includes these proposed savings.

QCA assessment

Table 42 sets out the QCA's assessment of step changes in system-wide and regional operating costs over the UT5 pricing period.

Table 42 QCA assessment of step changes—system-wide and regional costs ($m)

Cost category	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*TOTAL*
Network Control, Safe working and Operations	3.12	3.52	5.17	4.96	16.77
Business Management	2.37	2.41	3.16	2.50	10.45
Infrastructure Management	-	-	-	-	-
Total step changes accepted	**5.49**	**5.93**	**8.34**	**7.46**	**27.21**

Totals may not add due to rounding.

Future treatment of proposed step-changes

The QCA has not applied a rigid materiality test in assessing proposed step changes for this investigation. This is in recognition that Aurizon Network's base-step-trend method is still maturing, and efficient costs will continue to be revealed over time. The QCA has also considered the effect of additional reporting requirements that may be arise upon approval of a replacement access undertaking for the UT5 pricing period.

Notwithstanding the QCA's acceptance of these relatively modest cost increments, the QCA has concerns with Aurizon Network's proposed use of step changes within the base-step-trend method. Forecasting expenditures using the base-step-trend approach should not be an exercise in identification and recovery of all anticipated business-as-usual costs and savings, or a supplementary cost pass-through mechanism.

It is not the QCA's role to form a view on the prudence and efficiency of individual business decisions, or to dictate whether specific functions should, or should not, be undertaken by Aurizon Network. Continuing to assess step changes at this level of detail will not advance the objectives of the incentive-based approach to regulation, which has been advocated by Aurizon Network, and supported by the QCA (section 7.4). In this regard the QCA notes Aurizon Network's acknowledgement that:

> Incentive regulation effectively seeks to establish upfront an efficient allowance for a bundle of costs, and then provides for the regulator to step away from the process. If additional costs are actually incurred in providing the services, these are borne by the regulated business, but similarly if they can achieve productivity improvements and reduce costs, they retain the benefit.[428]

The QCA agrees with this general premise. However, Aurizon Network's use of step changes to recover relatively modest business-as-usual costs does not appear to reconcile with this view of incentive regulation.

Broadly, the QCA considers its role is to develop a reasonable estimate of the efficient operating costs required to provide access to the declared service, within which Aurizon Network should make its own decisions on appropriate allocation of resources to meet its objectives. Doing so should recognise that, during the course of a regulatory period, costs in some categories will be higher than the corresponding base year allowance and others will be lower. This natural annual variation, along with prudent prioritisation of expenditure, underpins the incentives within the base-step-trend approach.

Importantly, this approach should ideally apply symmetrically. That is, small decreases in some expenditure items are expected to be offset by increases in others.

In recognition of this, the QCA will place greater emphasis on the drivers of proposed step changes and the materiality of incremental costs in its future assessments. The QCA is minded to limit its consideration of future step changes to incremental costs that are:

- necessary to fulfil new, or changed, binding statutory or regulatory obligations; and
- a reasonable estimate of the efficient incremental costs of fulfilling the new, or changed, binding statutory or regulatory obligation; and
- not funded through other components of the expenditure allowance or other aspects of approved allowable revenues; and
- of sufficient materiality such that the costs could not reasonably be met by an efficient entity operating within business-as-usual budget constraints, through prudent prioritisation of expenditures, or be otherwise mitigated.

7.5.5 QCA assessment—system-wide and regional operating expenditure

The QCA has assessed the elements of Aurizon Network's proposed system-wide and regional costs and has formed the view that the proposed allowance for these costs would provide for recovery of more than efficient costs. Having regard to the factors at s. 138(2) of the Act, the QCA does not consider this appropriate. The QCA has consequently developed an alternative estimate that it considers appropriate. The QCA's estimate is derived by making the following adjustments to Aurizon Network's proposed costs:

- substituting proposed 2014–15 base year costs with 2015–16 costs, removing the need for a number of proposed step changes
- removing proposed cash bonus adjustments from 2015–16 base year costs
- decreasing the allocation of Network Finance costs from 100 per cent to 97.2 per cent
- increasing the non-coal allocation of Network Train Operations costs from 2 per cent to 5.1 per cent

[428] Aurizon Network, sub. 40: 154.

- addition of various step changes for costs not captured in the base year
- inclusion of transformation savings relating to training and development costs
- applying the QCA's CPI inflation forecast and updated WPI inflation forecasts (section 7.10).

Applying these adjustments results in a total allowance for system-wide and regional costs for the UT5 pricing period of $276 million, which is around 5 per cent less than Aurizon Network's 2017 DAU proposal. The QCA's assessment of a reasonable allowance for system-wide and regional costs is set out in Table 43.

The QCA's decision on system-wide and regional costs is around $30 million or 12 per cent higher than the draft decision allowance. This is primarily due to the acceptance of revised methods of deriving non-coal allocations for Network Train Operations costs (increase of $4 million); revised allocations for Network Finance costs (increase of $1 million), and acceptance of additional step changes where Aurizon Network provided additional supporting evidence and justification (increase of $24 million).

Table 43 QCA assessment of Aurizon Network's system-wide and regional operating costs ($m)

Cost category	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*UT5 total*
Network Control, Safe Working and Operations	28.23	29.25	31.68	32.25	121.41
Infrastructure Management	17.82	18.25	18.75	19.26	74.08
Business Management	19.27	19.72	20.97	20.81	80.77
Total	**65.31**	**67.23**	**71.40**	**72.32**	**276.26**

Totals may not add due to rounding.

7.6 Corporate overheads

Aurizon Network's proposal

Aurizon Network proposed corporate overheads of $49.1 million in 2017–18, increasing to $52.6 million in 2020–21. The total proposed allowance over the UT5 pricing period is $203.8 million, which Aurizon Network said is 8.6 per cent lower than the total UT4 allowance.

Aurizon Network submitted that its proposed corporate overheads relate to non-operational costs incurred within the Aurizon group that Aurizon Network would reasonably incur if it operated on a stand-alone basis. Table 44 summarises Aurizon Network's proposed corporate overheads for the 2017 DAU period.

Table 44 Aurizon Network's proposed corporate overheads ($m)

Function[a]	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*UT5 total*
Board and CEO	2.07	2.12	2.17	2.23	8.58
Finance	3.03	3.11	3.20	3.29	12.62
Enterprise real estate	14.82	15.45	15.78	16.04	62.09
Human resources	3.72	3.83	3.94	4.06	15.55
General counsel and company secretary	1.50	1.54	1.58	1.62	6.23

Function[a]	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*UT5 total*
Information technology (IT)	18.03	18.31	18.60	18.89	73.82
Safety, health and environment	2.49	2.56	2.63	2.70	10.38
Other enterprise services	3.43	3.55	3.69	3.82	14.49
Total	**49.08**	**50.46**	**51.58**	**52.65**	**203.77**

a For more information on the roles and responsibilities of these functional areas, see Aurizon Network sub. 1: 345–347.

Source: Aurizon Network corporate overhead model.

Totals may not add due to rounding.

Aurizon Network also adopted different methods for allocating some shared costs in its UT5 proposal compared with the approach used in its 2016 Undertaking. Specifically:

- Network Finance and Network Legal costs are included in Business Management (system-wide and regional costs) rather than corporate overheads (section 7.5.3).
- Enterprise real estate costs are allocated using a more sophisticated approach, based on a detailed analysis to identify costs specifically attributable to the network business.
- Shared finance services costs are allocated based on the number of transactions performed (for accounts receivable and accounts payable functions) and FTEs (for payroll costs). These costs were previously allocated using a direct cost allocator.

QCA analysis and assessment

When assessing Aurizon Network's proposed corporate overheads, the QCA has had regard to the factors set out in s. 138(2) of the QCA Act and have given them appropriate weight in making our assessment.

Aurizon Network is part of the vertically integrated Aurizon Holdings Limited. The QCA Act requires us to form a view on what constitutes the efficient costs of the declared service provided by Aurizon Network, not Aurizon Holdings' efficient costs.

Specifically, s. 137(1A)(b) of the QCA Act requires that Aurizon Network's access undertaking must include provisions for preventing Aurizon Network from recovering, via the access price, costs that are not reasonably attributable to the provision of the declared service.

The QCA is of the view that this is particularly relevant in assessing Aurizon Network's corporate overheads, given the vertically integrated nature of Aurizon Network. In forming our view, we need to be satisfied that the corporate overheads allocated to Aurizon Network's allowable revenues are reasonably attributable to the provision of the service.

Stakeholder comments

Stakeholders expressed concerns regarding a number of aspects of Aurizon Network's proposed corporate overheads. The QRC considered that the reduction in proposed overheads appears to be mostly due to the reallocation of the Network Finance and Network Legal costs from corporate overhead to Business Management costs.[429]

[429] QRC, sub. 21: 49.

Pacific National expressed concerns that Aurizon Network may seek to 'over allocate' shared costs to the regulated business and gain a competitive advantage in the above-rail business.[430] The QRC shared a similar concern and requested particular scrutiny of the proposed corporate overhead allowance.[431]

The QRC also questioned why Aurizon Network is seeking an increase in corporate overheads, given that its members have faced significant reductions in overheads in response to the downturn in coal prices during UT4, requiring reduced layers of management, less labour, greater productivity and less use of external service providers.[432]

In its collaborative submission, Aurizon Network disagreed with the QRC's submission, stating that there has been a reduction in the submitted cost allowances in almost all functional areas. Aurizon Network added that corporate overheads of the Aurizon group have decreased since UT4 was submitted as the company continues to implement transformational changes, and noted that actual costs for 2014–15 have been adjusted to include targeted savings for 2015–16.[433]

Aurizon Network also said that the use of direct costs as an allocation methodology implicitly includes efficiencies, as it results in a lower cost allocation than would otherwise be provided using a blended allocator methodology.[434]

Benchmarking

Anglo American and the QRC called for greater use of benchmarking to assess Aurizon Network's proposed corporate overhead costs.[435] Anglo American challenged the relevance of the benchmarking information submitted by Aurizon Network and suggested the QCA consider more relevant comparisons, such as the ARTC, where appropriate, properly validated by relevantly qualified consultants with access to complete information.[436]

As discussed above, the QCA does not consider it appropriate to conduct detailed benchmarking of Aurizon Network's operating costs at this time.

For the UT4 investigation, Aurizon Network commissioned a report by Ernst & Young (EY) on the benchmark efficiency of Aurizon Network's corporate overheads.[437] Aurizon Network has made reference to the findings of the EY report to support the reasonableness of some of its proposed corporate overhead allocations for the UT5 pricing period.

While we have considered Aurizon Network's references to the EY report, the report was based on data from 2012 and its findings may now be of diminished relevance to the QCA's assessment of Aurizon Network's corporate overheads for the UT5 pricing period. As such, we have not given significant weight to these findings in our assessment.

Aurizon Network also conducted a review of cost allocation methods used by other regulated entities in support of its proposed allocations of corporate overheads.[438] The QCA has

430 Pacific National, sub. 19: 6; sub. 61: 12.
431 QRC, sub. 21: 49.
432 QRC, sub. 21: 49.
433 Aurizon Network, sub. 26: 20–21.
434 Aurizon Network, sub. 26: 21.
435 Anglo American, sub. 18: 12; QRC, sub. 21: 49.
436 Anglo American, sub. 18: 12.
437 Ernst & Young 2013.
438 Aurizon Network, sub. 1: 223–224.

considered this information in deciding whether Aurizon Network's proposed allocators are appropriate.

The Aurizon group has realised significant cost savings in recent years through its transformation program, which will continue through the UT5 pricing period. Aurizon Network said that these transformational activities have delivered savings of $57 million in Aurizon group corporate costs during 2014–15 and 2015–16. These savings have been realised through reductions in labour costs (FTEs), professional services and rationalisation of the property portfolio and improved procurement practices.[439]

7.6.1 Forecasting method

Aurizon Network's proposal

Aurizon Network's proposed corporate overheads have been derived by allocating a portion of Aurizon group shared costs that Aurizon Network considers would reasonably be incurred if Aurizon Network were a stand-alone entity. Costs are allocated to allowable revenues based on various parameters, such as FTEs, direct costs or other causal allocators. The allocation rates applied are fixed and do not change each year with changes in underlying parameters.

Once identified and allocated to Aurizon Network, these costs become baseline costs for a base-step-trend forecast for the UT5 pricing period, similar to that used in developing the system-wide and regional cost forecast. Aurizon Network used actual 2014–15 costs as base year expenditure, before adjusting for identified efficiencies and one-off costs, real cost escalations, and step changes, to produce a forecast for the UT5 pricing period.

QCA analysis and assessment

As discussed in the context of system-wide and regional costs, the QCA considers that the base-step-trend method is a reasonable forecasting approach when applied appropriately.

The QCA considers that Aurizon Network's forecasting approach is reasonable in the current circumstances, and acknowledges that the QCA has approved this approach in the past. Nonetheless, we consider that Aurizon Network's application of the method is not appropriate in some aspects. These matters are discussed below.

7.6.2 Choice of base year

Aurizon Network's proposal

Aurizon Network used 2014–15 costs as base year costs to develop its corporate overhead forecasts. As is the case for system-wide and regional costs, the QCA asked Aurizon Network to provide updated corporate overhead forecasts using 2015–16 actual costs as the baseline.

QCA analysis and assessment

The QCA's considerations regarding the appropriate base year for system-wide and regional costs are equally relevant to selecting the base year for corporate overhead costs.

In general, if using actual incurred costs as base year costs in a base-step-trend forecast, the QCA considers it appropriate to use the most recent cost data available where possible, as we consider this is likely to result in the best estimate of future recurrent costs. The QRC agreed with this approach.[440]

[439] Aurizon Network, sub. 1: 220.
[440] QRC, sub. 53: 25.

Using the most recent cost data available is particularly relevant when developing forecasts of Aurizon Network's efficient corporate overheads, as the Aurizon group has realised efficiencies in recent years, which are not fully captured in the proposed 2014–15 base year costs. This is important to our assessment of Aurizon Network's corporate overheads, as the majority of savings have been realised within Aurizon group business units other than the Aurizon Network business. The QCA considers this a compelling reason to adopt 2015–16 as the base year for corporate overheads as it better reflects those recent efficiency gains. AECOM also recommended that 2015–16 be adopted as the base year. Aurizon Network accepted the use of 2015–16 as the base year for corporate overheads.[441] While 2016–17 actual costs have become available we consider that 2015–16 costs, once suitably adjusted, remain a reasonable basis for developing forecasts for the UT5 pricing period.

Base year adjustments

Aurizon Network has examined its base year actual corporate costs to identify and remove one-off costs and expected cost savings.[442] The QCA reviewed these adjustments in Aurizon Network's corporate overhead model and considers them appropriate.

During the QCA's investigation, Aurizon Network submitted that, should the QCA adopt 2015–16 as the base year, then it should use actual staff bonus costs incurred in 2014–15 rather than those in the 2015–16 base year. Aurizon Network considered that 2014–15 bonus costs were a more appropriate base estimate of likely future costs given that bonuses paid in 2015–16 were lower than would normally be expected.[443]

As is the case for cash bonuses within Aurizon Network's system-wide and regional costs, we note that allocated corporate cost bonuses paid in 2014–15 were significantly higher than those paid in both 2013–14 and 2015–16. AECOM considered that bonus costs in 2014–15 were anomalous due to long-term incentives maturing and concluded that 2015–16 bonuses were likely to be a reasonable indication of future costs.[444]

Nonetheless, AECOM recognised that the Aurizon Holdings board chose not to award any short-term incentives to the Managing Director and CEO, or this role's direct reports during 2015–16. AECOM considered it reasonable to expect that some short-term incentives would be awarded to key management personnel during the UT5 pricing period. AECOM noted that such incentives are a recognised means of attracting and retaining senior executives, and a common feature of remuneration packages, including those of similar businesses such as the ARTC and Pacific National.[445] On this basis, AECOM recommended that the 2015–16 base cost be adjusted by $0.6 million to reflect the allocated value of short-term incentives awarded to key management personnel in 2014–15.

In its draft decision, the QCA expressed a preliminary view that it was not appropriate to adjust the base year to reflect total bonus costs incurred in 2014–15. We considered that actual bonus costs incurred in 2015–16 were likely to offer a more realistic estimate of future recurrent costs.

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[441] Aurizon Network, sub. 40: 169.
[442] Aurizon Network, sub. 1: 220.
[443] Bonus costs allocated through the corporate overhead allowance include cash bonuses awarded to shared staff resources, including key management personnel such as the Managing Director and CEO. Bonuses included in the system-wide and regional cost forecasts relate to those awarded to staff directly attributable to the network business.
[444] AECOM 2017b: 33.
[445] AECOM 2017b: 33.

The QCA expressed the view that an efficient organisation would offer short-term attraction and retention incentives for key senior executives, and that it is reasonable for the corporate overhead allowance to include some allocation of these costs. On this basis, we accepted AECOM's recommendation to include a partial adjustment for key management personnel short-term incentives, which were not included in the 2015–16 base year cost.

In its March 2018 submission, Aurizon Network supported an adjustment but suggested the allowance be based on an average of recent actual bonuses, consistent with its revised approach for estimating bonus amounts relating to system-wide and regional costs.[446] Aurizon Network suggested a total bonus amount based on the average bonus expenses for the four years 2012–13 to 2015–16 for each corporate cost centre included in the allocation to Aurizon Network.[447]

While the QCA notes that annual bonus costs do fluctuate, it does not consider Aurizon Network’s historical actual bonuses display sufficient annual volatility to render the base year approach biased, as long as base costs are appropriately adjusted. We do not consider it appropriate to depart from the base year approach in favour of an averaging approach, in this instance.

However, as noted above, the QCA agrees that 2014–15 actual bonus costs are unlikely to be representative of future costs, which would reasonably be expected to include some allowance for short-term incentives for key management personnel. For these reasons, our decision is to adopt the 2014–15 actual bonus cost and include an adjustment (based on the difference between 2015–16 and 2014–15 short term incentives) to reflect a reasonable allowance for these incentives.

The QCA considers this results in an adequate allowance for key management personnel incentives. The QCA is of the view that, where Aurizon Network’s management and board chooses to award bonuses in excess of this allowance, these costs should be borne by the company and its shareholders.

7.6.3 Allocation of costs

Aurizon Network's proposal

Aurizon Network identified 161 categories of shared costs (cost centres) that it considers relevant to the network business and are included in the corporate cost base for the UT5 pricing period. These costs capture functions performed within the Aurizon group that Aurizon Network considers it would necessarily undertake if it were a stand-alone entity.[448] Aurizon Network said that it has allocated shared costs to the network business that are:

- directly related to below-rail operations (for example, depreciation of network buildings); or
- not directly related to below-rail network operations but which do provide services to the below-rail network business and/or would be required for a stand-alone regulated business.[449]

[446] Aurizon Network, sub. 40: 169–170.
[447] Aurizon Network, sub. 40: 169–170.
[448] Aurizon Network, sub. 1: 220.
[449] Aurizon Network, sub. 1: 221.

Aurizon Network said that costs that are not directly related to below-rail network operations, and which provide no services to the below-rail network business (for example, Above-Rail Finance), are excluded from the corporate cost base.[450]

Once identified, these shared costs have been proportionally allocated to the network business using various parameters including percentage of:

- full-time equivalents (FTEs as a measure of employee numbers—calculated as below-rail network FTEs as a percentage of total Aurizon Holdings Limited Group FTEs)
- transactions processed (for accounts payable and receivable)—calculated as the number of transactions processed for Aurizon Network as a percentage of transactions processed for the Aurizon Holdings Limited Group
- direct costs—calculated as the direct operating costs of the below rail network business as a percentage of the direct operating costs of the operational functions of the Aurizon Holdings Limited Group.[451] Aurizon Network said that a direct costs method has been used where no causal driver could be identified to allocate costs to Aurizon Network.

Table 45 sets out the parameters used to allocate shared corporate costs to the network business.

Table 45 Aurizon Network's proposed corporate cost allocators

Shared corporate cost	***Allocation parameter***
Board and CEO	Direct costs
Finance	
CFO, Treasury, tax and insurance, Investor relations, Enterprise procurement	Direct costs
Finance Partner Marketing and Operations	Nil allocation
Group accounting, planning and reporting	Nil allocation
Network Finance	Nil—Transferred to Business Management
Finance Shared Services	
Accounts receivable	Accounts receivable transactions processed
Accounts payable	Accounts payable transactions processed
Payroll	FTEs
Enterprise Real Estate	Property and associated costs directly identifiable. FTE's applied to non-directly identifiable costs.
Human Resources	
Executive Vice President	FTEs
Share based payments	Direct costs

[450] Aurizon Network, sub. 1: 221.
[451] Direct costs exclude capital costs, maintenance costs, corporate overheads, energy and fuel, and access charges.

Shared corporate cost	*Allocation parameter*
Business partner teams, organisational capability, Enterprise support	FTEs
Brand and Communications	Direct costs (excluding Corporate Sponsorship and Events—nil allocation)
Enterprise services	
EVP, Company secretary, internal audit, information technology	Direct costs
General Counsel	Direct costs
Network Legal	Nil—Transferred to Business Management
Safety, Health and Environment, Risk services	FTEs

Source: Aurizon Network, sub. 1: 222.

Compared with UT4, Aurizon Network has made a number of changes to its allocation approach for the UT5 pricing period, specifically:

- Network Finance and Network Legal costs are now included as the proposed system-wide and regional costs (direct costs). These costs are no longer captured in the corporate overhead (discussed in section 7.5.3).
- Shared finance services are proposed to be allocated based on the percentage of transactions processed, and payroll costs are allocated based on FTEs.
- Aurizon Network said that it had reviewed the occupancy footprint of the network business for operational sites, property and facility related assets in order to confirm property and facility maintenance costs for inclusion in this overhead cost proposal. The FTE allocator is applied to non-directly identifiable costs. Aurizon Network said this has resulted in a more accurate cost allocation of its 'enterprise real estate' shared costs.[452]

QCA analysis and assessment

Section 137(1A)(b) of the QCA Act requires that Aurizon Network's access undertaking must include provisions for preventing Aurizon Network from recovering costs that are not reasonably attributable to the provision of the declared service.

In considering an appropriate allocation of shared overhead costs, we have considered the reasonableness of:

- the nature of costs allocated to Aurizon Network, and whether they would be reasonably incurred if Aurizon Network was a stand-alone network business
- the parameters used to allocate those costs, and the extent to which the resulting allocated amounts are a reasonable reflection of the contribution of the Aurizon Network business to the total costs.

In general, the QCA considers that shared costs should be allocated in a manner that advances the pricing principle at s. 168(c) of the QCA Act. That is, costs should not be allocated in a way that allows Aurizon Network to set terms and conditions for access that discriminate in favour of downstream operations of a related body, for example, by subsidising its non-regulated activities by over-allocating shared costs to its regulated activities. To achieve this, the QCA

[452] Aurizon Network, sub. 1: 228.

considers that shared costs should, wherever possible, be allocated using a causal allocator that reasonably approximates the contribution that the network business makes to the total shared cost.

Stakeholders expressed general concerns regarding allocation of some categories of corporate overheads, in particular, whether allocations result in cross-subsidisation of Aurizon Network's non-regulated activities through its regulated revenues for below-rail services.[453]

Nature of allocated costs

Aurizon Network uses the assumption of a stand-alone business to estimate its allocated corporate overhead costs. This implies that the allocated corporate cost base may include costs that are not directly related to the provision of below-rail services to coal-carrying trains, but would likely be incurred if Aurizon Network was a stand-alone business.

The QCA notes there may be alternative ways of estimating an efficient allocated corporate overhead allowance for Aurizon Network, which could be examined in future reviews. The QCA considers that stand-alone cost estimates represent the upper-bound of a range of potential characterisations of efficient base costs, however we consider the proposed approach reasonable at this time.

The QCA has reviewed the categories of costs allocated to the corporate overhead allowance and finds them to be generally reasonable, on the basis that they would likely be incurred if Aurizon Network were a stand-alone entity.

Anglo American disagreed with the inclusion of a $0.4 million per year allocation for investor relations costs, which are a component of the allocated finance cost base. It did not accept that a stand-alone rail network business necessarily needs to be an ASX-listed company and therefore entitled to an allowance for related overheads.[454]

Aurizon Network said that its investor relations team manages strategic communications for the investment community to keep its debt and equity investors, and analysts, informed about the performance of the company to ensure future sources of funding.[455] The costs included in this category relate to debt capital market disclosures, presentation of results to analysts, debt and equity investor roadshows, consultancy costs for research on market and investor sentiment and conditions, and monthly shareholder analysis.[456]

The QCA considers it likely that such costs would reasonably be incurred by a stand-alone monopoly business such as Aurizon Network. While being an ASX-listed public company likely brings with it additional costs, we consider that many of the investor relations activities identified by Aurizon Network would be incurred by a stand-alone monopoly network business, irrespective of how the company raises debt and equity.

Corporate restructure

The Aurizon group has undergone significant structural change in recent times. A notable element of this change is the decision to restructure the company from a 'functional' based model to a 'business unit' based model. This restructure took effect from 1 July 2017.

[453] QRC, sub. 21: 48–49; Anglo American, sub. 18: 12–13; Pacific National, sub. 19: 6.
[454] Anglo American, sub. 18: 12.
[455] Aurizon Network, sub. 1: 227.
[456] Aurizon Network, sub. 1: 227.

Part of this restructure involved the transfer of the 'Infrastructure Engineering' and 'Infrastructure Delivery' functions, along with around 270 associated staff, from Aurizon Operations into Aurizon Network. The QCA understands these functional areas are primarily involved in design and delivery of new capital projects, and asset renewal and maintenance activities. In March 2018, Aurizon Network submitted that absorbing these functions has implications for its share of corporate overhead costs during the UT5 pricing period.

The proposed operating cost allowance set out in the QCA's draft decision was based on the organisational structure of the business—and the subsequent cost structure—that was in place at the time of Aurizon Network's 2017 DAU submission (November 2016). However, in its March 2018 submission, Aurizon Network proposed to amend its corporate overhead forecasts and cost structure to reflect the impacts of the restructure.[457]

Prior to the corporate restructure, Infrastructure Delivery and Infrastructure Engineering functions were provided by Aurizon Operations to Aurizon Network through service contracts. Within the fee charged to Aurizon Network for these services, was an amount known as the 'commercial margin' which was intended to recover Aurizon Operations' share of the corporate overhead associated with these providing services. The commercial margin was established through the *Operations Master Rail Services Agreement* between Aurizon Network and Aurizon Operations.

Payments for Infrastructure Delivery services, inclusive of the commercial margin within the fee, were treated as a capital expense and recovered through the capital expenditure claim. The QCA understands that fees charged for Infrastructure Engineering services (also including the commercial margin) were partly capitalised, with non-capitalised costs treated as 'consumables' and expensed by Aurizon Network.[458]

As a result of the transfer of these functions, Aurizon Network has indicated that the direct costs of Infrastructure Delivery services will continue to be capitalised. However, Aurizon Network has proposed to exclude the commercial margin component from the capitalised cost, and recover the corporate overhead associated with these services through the corporate overhead allowance using revised allocation rates. Aurizon Network submitted:

> Now that these services are not being performed by another legal entity (Aurizon Operations) and are within Aurizon Network, we propose that there should be a consistent methodology with respect to the recovery of corporate costs – that being that the same methodology as proposed for UT5 for all other divisional areas within Aurizon Network (including maintenance costs and business management costs). This change will result in an increase in corporate overhead allowance, but a decrease in capital costs (reflected in the capital indicator) going forward.[459]

The restructure has the following impacts on Aurizon Network's proposed corporate overhead proposal:

- Increased direct costs and a larger direct cost allocator rate
- Increased FTEs and a larger FTE allocator rate
- Increased real estate footprint and a larger share of associated costs
- Increased proportional usage of IT services and a larger allocation of shared IT costs.

[457] Aurizon Network, sub. 40: 170.
[458] Aurizon Network, Response to QCA request for information (issued 4 July 2018), 13 July 2018; Aurizon Network, Response to QCA request for information #85, 25 June 2018.
[459] Aurizon Network, sub. 40: 170.

Aurizon Network's March 2018 submission indicates that these changes increase the base year corporate overhead cost by around $11 million.[460, 461] However, Aurizon Network notes that it reduced the proposed capital indicator to reflect the amount of previously capitalised corporate overhead relating to Infrastructure Delivery services, which it suggests should be recovered through the corporate overhead allowance, going forward.[462]

The QCA has considered Aurizon Network's March 2018 submission suggesting that the proposed corporate overhead allocations be updated to reflect the impact of the corporate restructure. However, we consider it is not appropriate to adopt the approach suggested by Aurizon Network in this instance, for the reasons set out below.

Treatment of Infrastructure Engineering overheads

With regard to the transfer of the Infrastructure Engineering function, the QCA understands that costs associated with these functions will continue to be predominantly expensed, albeit as direct costs to Aurizon Network. Aurizon Network confirmed that the operating costs previously submitted included any non-capitalised Infrastructure Engineering costs and that there should be no cost impact from the restructure due to the transfer of the Infrastructure Engineering function.[463] To the extent that some portion of these costs were previously capitalised, and will continue to be capitalised during the UT5 pricing period, we consider that these costs would be captured in the proposed capital indicator.[464]

On this basis, the QCA considers that the 2015–16 base year for system-wide and regional costs, and the proposed capital indicator, adequately compensates Aurizon Network for the direct costs and corporate overheads attributable to the Infrastructure Engineering function. As such, no adjustments to corporate overhead allocation rates are necessary to ensure that Aurizon Network is reasonably compensated for this element of the restructure. Including Aurizon Network's suggested adjustments to corporate overhead allocators to recognise the transfer of the Infrastructure Engineering function would result in double-counting of overheads associated with this function.

Treatment of Infrastructure Delivery overheads

The QCA considers it appropriate to approve an amount within the overall UT5 pricing period revenue allowance, to appropriately compensate Aurizon Network for the overhead allocation associated with the transferred Infrastructure Delivery function.

The QCA acknowledges that Aurizon Network's suggested approach to recovering these costs appears generally consistent with accounting standards, and its own group capitalisation policy, which the QCA has considered. It is also considered reasonable that the transfer of Infrastructure Delivery staff results in an increase in corporate cost allocation rates, with an offsetting reduction to the capital indicator, all other things being equal.

However, as discussed in Chapters 3 and 8, the QCA has decided to reclassify ballast undercutting renewal costs as a capital expense, using a transitional approach. In the interests of consistency, the QCA considers a similar transitional approach to reclassifying Infrastructure

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[460] Aurizon Network, sub. 40: 170.
[461] Including the impact of a revised IT allocation method, discussed in section 7.6.3.
[462] Aurizon Network, sub. 40: 170.
[463] Aurizon Network, Response to QCA request for information #85, updated 25 June 2018.
[464] Aurizon Network confirmed that deductions to the capital indicator relate only to Infrastructure Delivery costs (Aurizon Network, Response to QCA request for information, 13 July 2018).

Delivery overheads is appropriate on the basis that this also represents a change in the recognition of costs.

As an interim measure, and consistent with the transitional approach to recognising ballast undercutting renewal costs as capital expenditure (Chapter 8), the QCA will adopt a 2-year transition before recognising these previously capitalised Infrastructure Delivery overhead costs as operating expenditure.

For the first two years of the UT5 pricing period, the QCA considers it appropriate to approve corporate costs for the transferred Infrastructure Delivery function consistent with the approach proposed by Aurizon Network in its 2017 DAU, rather than the revised position set out in its March 2018 submission. Under this approach, corporate overheads associated with the Infrastructure Delivery function will continue to be treated as capital costs, reflected in the commercial margin component contained in the 2017 DAU proposed capital indicator. This allowance will be identified as the 'capital-funded restructure overhead'.

For the final two years of the UT5 pricing period, the QCA will expense these costs as a discrete line item within the corporate overhead allowance. This expensed allowance is equivalent to the previously capitalised values attributable to the commercial margin component of Aurizon Network's 2017 DAU capital indicator proposal.[465] These two years of costs will be identified as the 'opex-funded restructure overhead'. The QCA's decision on allowances for both the capital- and opex-funded restructure overhead components is set out in Table 46.

This approach results in an overall allocation of corporate overhead which is commensurate with the amount that would have been recovered as a capital cost under the previous charging arrangements, prior to the restructure, and ensures that the reclassification of costs does not apply 'retrospectively'. That is, the change in classification of costs will not be backdated to take effect from the commencement of the UT5 pricing period, which has already passed. This approach is consistent with that used in reclassifying Aurizon Network's ballast undercutting renewals costs.

Treating these costs in this manner is appropriate, having regard to the factors at s. 138(2) of the Act as it allows Aurizon Network to recover at least the efficient costs of providing the Infrastructure Delivery function. The QCA considers this approach effectively balances the interest of access seekers and access holders, and the legitimate business interests of Aurizon Network.

The QCA acknowledges that significant corporate restructuring has occurred within the UT5 pricing period and we understand further restructuring may occur during the period. The QCA considers the completion of this restructuring should present a compelling trigger for Aurizon Network to engage in a fulsome review of its allocation methods, to reassess the relevance and robustness of its corporate cost allocations.

In future investigations, the QCA considers corporate overhead allowances should be derived using a method that appropriately allocates efficient incremental costs arising from corporate restructuring. However, we will expect Aurizon Network to demonstrate due consideration of the effects of the restructuring across all allocations, along with a reasonable degree of consistency in the treatment of costs for regulatory and accounting purposes.

[465] Capital indicator margin amounts have been grossed-up by 6 months of WACC at 5.7% to convert values from mid-year to end of year terms, consistent with the assumed timing of cash-flows for pricing purposes.

Table 46 Recovery of expensed Infrastructure Delivery overhead for UT5 pricing period ($m)

Allowance	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*UT5 total*
Margin on Infrastructure Delivery services isolated from Capital Indicator ($ mid-year)	6.09	6.21	6.33	6.33	24.97
Convert to end of year $ - half-WACC (5.7%)	-	-	6.51	6.51	13.02
Opex-funded restructure overhead allowance	-	-	**6.51**	**6.51**	**13.02**

Source: Aurizon Network, sub. 40: 57; QCA analysis.

Methods of allocation

In assessing Aurizon Network's proposed allocation approaches, the QCA has considered whether the parameters used to allocate each category of shared cost are likely to result in an allocation of costs that reasonably reflects Aurizon Network's contribution to the total overhead cost pool.

The QRC expressed concerns with the proposed treatment of Finance Shared Services and Enterprise Real Estate costs and suggested that the allocation methods were changed in order to increase the operating cost allowance.[466] Aurizon Network said this was not the case, and noted that there has been a reduction in the submitted cost allowances in almost all functional areas.[467]

The QRC said that allocations should be rejected if they result in the regulated business cross-subsidising the unregulated activities of the Aurizon group.[468]

The QCA has considered the methods used to allocate Aurizon Network's shared corporate overhead costs and finds the allocations they produce to be reasonable, with the exception of the allocator for shared IT costs. The QCA has also examined Aurizon Network's proposed FTE allocation rate and considers this should be updated for more recent data.

Direct cost allocator

Around 60 per cent of Aurizon Network's proposed corporate overhead costs are derived using a 'direct cost' allocation method. That is, the total of the relevant shared costs are allocated using the proportion of Aurizon Network total direct costs, to Aurizon group total direct costs.[469] Aurizon Network has used this allocator for cost centres where no causal driver could be identified for allocation of costs to Aurizon Network.[470] For the purposes of deriving the allocator, direct costs are calculated in a manner consistent with the approach approved for Aurizon Network’s 2016 Undertaking.[471]

[466] QRC, sub. 21: 49.
[467] Aurizon Network, sub. 26: 20.
[468] QRC, sub. 21: 49.
[469] Total direct costs used to derive the allocator are exclusive of maintenance costs, corporate overheads, energy and fuel, and access charges.
[470] Aurizon Network, sub. 1: 221.
[471] The estimated direct cost allocator is a static allocation rate based on costs observed in 2015–16. It is not based on the proportion resulting from the QCA’s approved UT5 costs as suggested by the QRC (QRC, sub. 53: 25). Estimating a dynamic allocator on an *ex ante* basis would not be feasible given the circularity of the calculation. The QCA considers a fixed direct cost allocator is a reasonable approach at this stage.

Aurizon Network submitted that the direct cost allocator will increase from 19 per cent during UT4 to 24 per cent for the UT5 pricing period.

AECOM noted that Aurizon Network's direct costs have been largely static during recent years, while Aurizon group costs have reduced. The result of this is an increase in the ratio of Aurizon Network to Aurizon group direct costs and therefore an increase in the direct cost allocation rate. Based on its analysis, AECOM considered the proposed direct cost allocation rate of 24 per cent was reasonable.

The QCA reviewed the application of the direct cost allocator and considers it a reasonable parameter for allocating the costs it applies to, with the exception of information technology costs.

In March 2018, Aurizon Network submitted that the direct cost allocator had increased to 30.7 per cent resulting from the transfer of the Infrastructure Delivery and Infrastructure Engineering functions.[472] Aurizon Network proposed to adjust the direct cost allocator to reflect the addition of these staff, by including the associated cost (before capitalisation) in both the numerator and the denominator of the direct cost ratio calculation. In effect, this approach increases the direct cost allocation to Aurizon Network to account for the increase in costs (including capitalised costs).

As discussed above, the QCA's decision is to apply a transitional approach to recognising these Infrastructure Delivery overheads as operating expenditure. This transitional approach reasonably compensates Aurizon Network for corporate overheads associated with the corporate restructure through a combination of capital and operating expenditure allowances. As such, the QCA has not updated the direct cost allocator to reflect Aurizon Network's suggested post-restructure values.

FTE allocator

Aurizon Network proposed a FTE allocator for the UT5 pricing period of 15.8 per cent, which is a slight increase over the UT4 rate of 15.4 per cent. The QCA reviewed the application of the FTE allocator and considers it is a reasonable parameter for allocating the costs to which it has been applied.

AECOM noted that the actual FTE ratio has increased in recent years, due to reductions in staff numbers which have predominantly occurred in areas of the Aurizon group, other than the network business. Based on the latest available FTE information at the time (actual FTE at December 2016), AECOM calculated the FTE allocator to be 16.1 per cent in 2016–17.

For the purposes of the draft decision, the QCA formed a preliminary view to accept AECOM's recommended FTE allocator of 16.1 per cent, and applied this rate across the UT5 pricing period, including to the IT cost category. The QRC supported this position but expressed concern that Aurizon Network's share of costs continues to grow due to reductions in staff numbers in other parts of the Aurizon group. The QRC suggested that this situation should be monitored to determine whether this is caused by Aurizon Network's FTE count being inefficient.[473]

Aurizon Network's corporate restructure has a significant effect on the calculated FTE allocator for shared corporate costs. Aurizon Network submitted that, taking into account more recent data (actual FTEs at December 2017), the FTE allocator increases to 16.2 per cent. The addition

[472] Aurizon Network, sub. 40: 170–171.
[473] QRC, sub. 53: 25–26.

of the Infrastructure Delivery and Infrastructure Engineering teams from the restructure further increases the allocator 21.1 per cent.[474]

The QCA accepts that Aurizon Network's FTE count has increased as a result of the restructure. However, we not consider it appropriate to update the FTE allocator as suggested by Aurizon Network in its March 2018 submission. We have also not updated the FTE allocator for 2016–17 actual data as we do not consider the difference to be material in this case.

To give effect to the transitional reclassification of overheads, the QCA's decision is to apply a FTE allocator of 16.1 per cent, representing the pre-restructure FTE allocation rate used in the draft decision. This recognises that the transitional allowances set out in Table 46, and the 2015–16 base year for system-wide and regional costs, reasonably compensate Aurizon Network for corporate costs attributable to the transferred Infrastructure Delivery FTEs.

With regard to transferred Infrastructure Engineering staff, the QCA acknowledges that introducing these staff as internal labour resources will increase Aurizon Network's actual FTE count, all other things constant. However, we do not consider it appropriate to adjust the FTE allocator to recognise these additional FTEs at this time.

In effect, the restructure results in the cost of these resources shifting from an intercompany expense (charged by Aurizon Operations) to an internal direct cost to Aurizon Network. As the 2015–16 base year reflects the pre-restructure cost environment, the QCA expects that the 2015–16 revealed costs will include an amount for intercompany expenses that captures Infrastructure Engineering services provided by Aurizon Operations. The costs charged by Aurizon Operations included the commercial margin component, as set out in the *Operations Master Rail Services Agreement*. Therefore, the QCA considers the 2015–16 base year cost should provide adequate compensation for both the direct costs and corporate overhead associated with the transferred Infrastructure Engineering FTEs. To the extent that some Infrastructure Engineering costs are capitalised, we consider these costs would be captured in the approved capital indicator.

The QCA does not consider it appropriate to adopt Aurizon Network's suggestion to revise its FTE allocator in light of its corporate restructure, as proposed in its March 2018 submission. Nonetheless, the QCA's decision to adopt a transitional reclassification of Infrastructure Delivery overheads, along with using the 2015–16 base year for system-wide and regional costs, ensures that the overall revenue allowance appropriately compensates Aurizon Network for the direct costs and shared overheads associated with both the Infrastructure Delivery and Infrastructure Engineering functions.

Information technology costs

Aurizon Network included around $18 million in information technology costs per year in its proposed corporate overhead allowance, allocated using the direct cost allocator.[475] Aurizon Network said that these costs relate to managing information and business systems and are incurred centrally within the Aurizon group.[476]

During the UT4 investigation, Aurizon Network submitted a report commissioned by ITNewcom presenting benchmark costings for IT services that Aurizon Network considered would be required if it were a stand-alone entity.[477] Aurizon Network said there has been no significant

[474] Aurizon Network, sub. 40: 170.
[475] $16.6 million in the 2015–16 base year.
[476] Aurizon Network, sub. 1: 235.
[477] Aurizon Network, sub. 3.

change in its IT practices since this report was prepared and the benchmarks remain appropriate for the UT5 pricing period.

Aurizon Network said that escalating the benchmark IT cost established in the 2014 ITNewcom report implies a benchmark IT cost of $20 million in 2017–18. On this basis, Aurizon Network considered its proposed allocated IT cost of $18 million in 2017–18 to be efficient.[478]

While the use of a direct cost allocator for shared IT costs is consistent with the QCA's decision in UT4,[479] AECOM noted:

> IT costs are usually incurred or allocated on a per-seat or license basis, which therefore uses headcount. Aurizon had a benchmarking review of its IT services carried out by ITNewcom, who, in their December 2014 report, refer to the volume of licences in use for all IT assets at the time. We therefore consider that the relative number of licences should be used for cost allocation of IT services.[480]

The QCA sought additional information from Aurizon Network on the relative number of software licenses; however, the level of information available was not sufficient to derive an appropriate allocator. Given this, AECOM recommended that FTE count be applied as a proxy allocator.

In the draft decision, the QCA accepted AECOM's recommendation and formed a preliminary view that, in the absence of an allocator based on software license numbers, IT costs should be allocated by FTE count rather than direct costs. This position was supported by the QRC.[481]

Aurizon Network did not accept the QCA's preliminary position and submitted that it is not appropriate to apply the FTE allocator as IT services are not consumed equally amongst employees. Aurizon Network said that some staff use multiple devices, while others may have no allocated devices and share a common device when needed.[482]

Aurizon Network said it had undertaken further work to identify software application costs and devices directly attributable to each business unit. Based on this work, Aurizon Network suggested a revised allocator for IT costs which it considered more appropriate than an allocator based on FTEs or licence numbers.[483] Aurizon Network’s alternative allocation method was based on:

- directly identified application costs and end-user computer costs (allocated by percentage of licence costs and number of devices, respectively); and
- residual shared support costs allocated using the direct cost allocator.

In revising its IT allocation method, Aurizon Network made adjustments to include the impact of the corporate restructure.

AECOM reviewed Aurizon Network’s revised allocation method and found the approach to identifying directly attributable costs was reasonable. However, AECOM considered that an FTE allocator was a more representative than ‘direct cost’ for the remaining shared costs. AECOM

[478] Aurizon Network, sub. 1: 235.
[479] In its 2013 DAU, Aurizon Network proposed to use a blended allocator for costs where no causal driver could be identified (including IT costs). The QCA did not accept the proposed blended allocators and applied a direct cost approach to allocate costs where no causal driver could be identified.
[480] AECOM 2017b: 30.
[481] QRC, sub. 53: 25.
[482] Aurizon Network, sub. 40: 171.
[483] Aurizon Network, sub. 40: 171.

noted that Aurizon Network’s March 2018 submission reveals that 21 per cent of licence costs and 20 per cent of devices are attributable to Aurizon Network, which it noted are proportions similar to the revised FTE allocator suggested by Aurizon Network.[484]

The QCA considers that Aurizon Network’s IT allocator, as suggested in its March 2018 submission, offers a more rigorous approach than its initial proposal and reflects a more accurate causal allocation method. With regard to the allocation of residual shared IT support costs (those that are not directly attributable to business units), the QCA acknowledges Aurizon Network’s argument that IT services are not consumed equally among staff. However, in this instance, we agree with AECOM that FTEs are likely a better causal allocator than direct costs for the remaining shared support services. IT Newcom's 2014 report also suggests that its benchmark cost estimates are derived using volume measures such as number of licences, devices and staff headcount, among others.[485]

The QCA has applied the revised IT allocator for directly attributable devices and license costs proposed by Aurizon Network, with the remaining shared costs allocated using the FTE allocator. To give effect to the transitional reclassification of previously capitalised overheads discussed above, the QCA has adopted the pre-restructure FTE allocator of 16.1 per cent, consistent with the draft decision. This approach recognises that the transitional allowances set out in Table 46, and the 2015–16 base year cost, should adequately compensate Aurizon Network for allocated IT costs arising from the corporate restructure.

The QCA has also considered the IT Newcom benchmark cost estimates in forming its view on an appropriate allowance for IT costs.

The ITNewcom benchmark cost estimate is based on Aurizon Network sourcing and deploying its IT services on a 'stand-alone, insourced non-shared basis'.[486] While this is a reasonable methodological approach to estimating costs in some cases, the stand-alone benchmark cost is not necessarily the efficient cost to Aurizon Network. Rather, the QCA considers it represents an upper-bound of a reasonable cost estimate for Aurizon Network.

While the QCA's allowance is less than the IT Newcom benchmark estimate, it is derived using an allocative approach that assumes Aurizon Network shares in economies of scale realised by the Aurizon group. Aurizon Network's 2017 DAU proposed IT costs are also based on an allocative approach, and are also lower than the IT Newcom stand-alone estimate.

The QCA's decision also provides for a significant increase in information technology costs associated with maintenance and support services for Aurizon Network's recently implemented APEX system (section 7.5.4).

Enterprise real estate

Aurizon Network said that its enterprise real estate team has accountability for the Aurizon built environment.[487] The proposed corporate overhead allowance for the UT5 pricing period includes an annual allocated amount of around $14 million for the enterprise real estate function, comprised of costs associated with corporate sites, operational sites, housing accommodation, electrical assets, property services and facilities management costs.

[484] AECOM 2018: 23.
[485] See, Aurizon Network sub. 3: 15–23.
[486] Aurizon Network, sub. 3: 6.
[487] Aurizon Network, sub. 1: 228.

For its 2017 DAU proposal, Aurizon Network undertook a more detailed analysis of these costs, which it said results in a more accurate cost allocation for these services.[488] This analysis involved identifying Aurizon Network's occupancy of sites, before evaluating the extent to which it is responsible for licence costs, corporate contracts and facilities management costs, council rates, electricity, land tax and outgoings.[489] Aurizon Network applied its proposed FTE allocator to the remaining enterprise real estate costs that were not allocated through this process.

The QCA reviewed the proposed allocation methods and considers they result in a reasonable allocation of costs, informed by a more rigorous assessment of causal drivers compared with previous approaches.

Aurizon Network's proposed approach results in some costs being allocated to the corporate overhead allowance that have not been explicitly included in the past, including 'operational sites' and 'electrical assets consumption costs'. These costs are discussed below.

Operational sites

Aurizon Network's allocated enterprise real estate allowance includes approximately $5 million per year for costs associated with operational sites. Aurizon Network said that these costs were not included in its UT4 expenditure proposal, due to the corporate cost allowance being submitted for maintenance and other areas separately.[490]

Aurizon Network's operational sites are mostly regional depots that support maintenance activities. Costs associated with these sites include license and leasing costs, facility maintenance, corporate contracts, land tax, council and utility charges.

Costs associated with operational sites that are solely occupied by Aurizon Network have been fully allocated to the proposed corporate overhead allowance. Where sites are shared with other Aurizon group business units, costs have been allocated using other methods including occupancy percentages and proportion of site area occupied.

Aurizon Network said that most operational sites are situated on land owned by Aurizon Property Pty Ltd and occupied by Aurizon Network and other Aurizon group businesses under intercompany lease arrangements. Aurizon Network engaged CBRE Valuations to provide market rental value estimates for these sites.[491] For multi-user sites, Aurizon Network said that market rate estimates were only applied to the areas occupied by Aurizon Network.[492]

Aurizon Network said that the remainder of its operational sites are either:

- situated on land owned by third parties and are subject to commercial leases, in which case costs are allocated in accordance with the licence agreement; or
- located on land owned by the State Government or Aurizon Network, in which case no associated lease/license costs are included in the proposed allowance.

[488] Aurizon Network, sub. 1: 228.
[489] Aurizon Network, sub. 1: 228–230.
[490] Aurizon Network, sub. 1: 229.
[491] Aurizon Network, Response to QCA request for information #30, 16 March 2017.
[492] Aurizon Network, sub. 1: 231.

Anglo American queried why Aurizon Network pays commercial rates for multi-user operational site tenancies it says are owned by Aurizon Property Pty Ltd, given the head leasing arrangements with the State Government.[493]

In its collaborative submission, Aurizon Network clarified that licence fees paid to Aurizon Operations (where the properties are owned by a related party), are based on the market rates estimated by CBRE Valuations Pty Ltd. The licence agreement between Aurizon Operations and Aurizon Network for the use of the properties provides for the licence fee to align to these market rates, and this licence fee is paid from Aurizon Network to Aurizon Operations.[494]

The QCA has reviewed Aurizon Network's approach to identifying and allocating these costs and considers it reasonable. We have also considered the advice prepared by CBRE Valuations and notes that the rental estimates were developed having regard to individual property characteristics and softening economic and property market conditions in many of the relevant localities. The QCA considers the market rental rates applied are reasonable.

Based on its review of Aurizon Network's expenditure models, AECOM concluded that the proposed costs for operational sites are already captured in the 2015–16 base year allocated corporate overhead cost.

The QCA understands that Aurizon Network will cease to incur costs associated with two of the operational sites, which will be decommissioned during the UT5 pricing period. AECOM found that the costs associated with these two sites were included in the 2015–16 allocated base year cost, and recommended a negative step change of around $0.13 million per year from 2017–18 to reflect that the sites will be decommissioned. The QCA considers it appropriate that Aurizon Network recovers reasonable costs associated with its operational sites. We note that these costs are included in the 2015–16 base year cost and, as such, formed a preliminary view in the draft decision that no further positive step change was needed. We accepted AECOM's recommendation and applied a total negative step change of $0.54 million to reflect costs associated with two operational sites that will be decommissioned during the UT5 pricing period.[495]

In its March 2018 submission, Aurizon Network provided updated allocations for operational site costs, to reflect the impact of the corporate restructure. Aurizon Network submitted that the restructure had resulted in an increased real estate footprint and an additional $1.4 million in allocated costs for operational sites.[496]

The QCA has not increased the allowance for operational sites as suggested by Aurizon Network. As noted in the context of other corporate cost allocators, the QCA considers that its transitional approach to reclassifying Infrastructure Delivery corporate overheads, along with revealed 2015–16 base year system-wide and regional costs, adequately compensates Aurizon Network for both the direct and allocated shared costs resulting from the restructure.

[493] Anglo American, sub. 18: 13.
[494] Aurizon Network, sub. 26: 21.
[495] Aurizon Network accepted this position is response to the QCA’s draft decision (Aurizon Network, sub. 40: 169).
[496] Aurizon Network, sub. 40: 170.

The QCA's decision is to adopt an allocation of operational real estate costs, consistent with the 'pre-restructure' 2015–16 base year.[497] We have also adopted AECOM's recommendation to apply a negative step change, which reflects costs associated with two operational sites to be decommissioned during the UT5 pricing period.

Electrical assets and consumption costs

Aurizon Network's proposed enterprise real estate costs include around $2.8 million per year in costs associated with electricity consumption charges, as well as maintenance and compliance costs for corridor electrical assets. These assets include signalling and communication equipment rooms, power equipment rooms and centralised traffic control, track coupling units, and power supply buildings.[498] Aurizon Network said that these costs were comprised of around $2 million in electricity consumption costs, and $0.6 million in maintenance costs in the 2014–15 base year cost.[499]

Aurizon Network noted that these costs were included in the UT4 allowance for train control, safe working and operations (system-wide and regional costs). However, under the Aurizon group's current structure, these costs are incurred within the enterprise real estate function.[500]

The proposed UT5 allowance for these costs is notably higher that the UT4 allowance of around $1.2 million per year. In explaining the proposed increase, Aurizon Network noted that some costs may not have been fully captured in the UT4 proposal due to organisational structural change taking place. Aurizon Network also noted that the UT4 allowance did not include the costs of maintaining these assets.[501]

The QCA sought further information from Aurizon Network on the breakdown of the maintenance component, which revealed that the majority of costs in 2014–15 related to electrical services (28%) and maintenance of air-conditioning (35%).[502]

AECOM formed the view that the proposed cost reflects a transition of functions due to organisational structural change, and recommended that the costs be accepted. AECOM reviewed the relevant cost centres in Aurizon Network's expenditure models and concluded there was no evidence of double counting of these costs. AECOM noted that the 2015–16 base year allocated corporate cost includes allowances of $2.26 million for electrical asset consumption costs and $0.55 million for allocated labour, attributable to this cost item.

The QCA considers that these costs are reasonable and are adequately reflected in the 2015–16 base year. As such, no further step change is required.

Finance shared services

Aurizon Network's finance shared services include accounts receivable, accounts payable, payroll processing and compliance, credit card management and reconciliations, and motor vehicle fleet management.[503] The proposed corporate overhead allowance includes an annual

[497] During the review of Aurizon Network's revised cost models provided in March 2018, Aurizon Network advised of an inadvertent double-counting of 'network housing' real estate costs. The QCA subsequently requested a corrected model and these corrected costs have been reflected in our decision.
[498] Aurizon Network, sub. 1: 230.
[499] Aurizon Network, Response to QCA request for information #32, 16 March 2017.
[500] Aurizon Network, sub. 1: 230.
[501] Aurizon Network, Response to QCA request for information #32, 16 March 2017.
[502] Aurizon Network, Response to QCA request for information #66, 19 May 2017.
[503] Aurizon Network, sub. 1: 226.

allocated amount of around $0.8 million for these costs, which are a subset of a broader category of allocated Aurizon group finance costs.[504]

In the UT4 pricing period, finance shared service costs were allocated using the direct cost percentage. For the UT5 pricing period, Aurizon Network proposed to allocate its accounts payable and accounts receivable costs using the proportion of transactions processed, and payroll costs using the FTE allocator. The balance of costs in this category are allocated using the direct cost allocator.

AECOM was of the view that using percentage of transactions processed to allocate accounts payable and receivable costs will provide an allocation that is more reflective of Aurizon Network's use of these shared functions. AECOM also noted that allocating payroll costs using an FTE allocator is considered reasonable practice, and has been used previously by regulated businesses, including SA Power.[505]

The QCA has considered Aurizon Network's proposed methods for allocating finance shared services costs and considers them appropriate and likely to result in a reasonable allocation of costs. Aurizon Network did not propose to update these allocations to reflect the impact of its corporate restructure, and the QCA has made no adjustments in this regard.

Network Legal and Network Finance

As discussed in section 7.5.3, the QCA considers Aurizon Network's proposal to categorise Network Legal and Network Finance costs as direct Business Management costs (included in the system-wide and regional cost allowance) is reasonable. The QCA and AECOM reviewed Aurizon Network's expenditure models and found no indication of double counting in the process of re-categorising these costs as system-wide and regional costs.

Allocation of overhead through AT_5 reference tariff

In response to the draft decision, the QRC submitted that corporate overhead costs attributable to the provision of electrical infrastructure should be recovered through the AT_5 reference tariff. The QRC stated:

> To the extent that any elements of an allocator used in allocating corporate overheads relate to the provision of electrical infrastructure, the QRC suggests that the relevant overhead should be recovered via AT5. For example, this should apply to the extent that any direct costs of Aurizon Network which are used to calculate the direct cost allocator are costs of providing electrical infrastructure.[506]

The QCA has not adopted the QRC's suggestion at this stage. The QCA notes that while the cost build-up for the AT_5 reference tariff does not include a specific allocation of corporate overhead costs directly attributable to electric traction, electric traction customers invariably bear some of the total allocated overhead cost through the AT_1 to AT_4 tariffs.

Non-coal allocations

Aurizon Network's proposed allocated corporate overheads do not include any explicit adjustment for costs associated with providing below-rail services to non-coal carrying trains on the CQCN.

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[504] These costs are distinct from the 'Network Finance' function, which has been included in the proposed system-wide and regional operating cost allowance.
[505] AECOM 2017b: 28.
[506] QRC, sub. 53: 26.

In considering Aurizon Network's proposed system-wide and regional costs, the QCA formed a preliminary view that some portion of the costs associated with providing below-rail services would be related to non-coal access, and should therefore be excluded from allowable revenues for coal-carrying services.

Conceptually, this logic could also reasonably be applied to allocated corporate overhead costs. However, Aurizon Network's allocated corporate overhead allowance is estimated using the assumption of costs that would be incurred by a stand-alone network business. This assumption implies that the allocated cost base may include expenses that are not directly related to the provision of below-rail services to coal-carrying trains, but would likely be incurred if Aurizon Network was a stand-alone business providing the regulated below-rail services. The QCA accepted this general approach in its decision on the 2016 Undertaking. If bound to this assumption, it is arguably reasonable that the allocated corporate overhead includes some allowance for services provided to non-coal-carrying trains. The QRC did not agree with this logic and argued that a non-coal allocation should apply to the corporate overhead allowance.[507]

The QCA acknowledges the QRC’s position on this matter, and notes there may be other ways of estimating an efficient corporate overhead allocation for Aurizon Network. While adopting a stand-alone assumption is reasonable in some instances, it typically produces cost estimates at the upper-bound of a range of possible estimates of efficient costs.

Notwithstanding the conceptual basis of the stand-alone assumption as it applies to allocated corporate overheads, the QCA considers that a broader allocation of overall operating costs to non-coal services, including corporate overheads, is reasonable. In recognition of this the QCA has applied a general, notional allocation of the overall operating costs allowance.[508]

The QCA has determined this general allocation based on the proportion of actual non-coal below-rail access charge revenue to total access charge revenue, as reported by Aurizon Network. The calculation and application of this allocation is illustrated in section 7.11.

While the QCA has made some attempt to attribute operating costs to non-coal services, we suggest that a review of cost allocation methods be undertaken in future, to establish an allocation approach that efficiently shares costs between coal and non-coal traffic, where such sharing is appropriate and reasonable. This is likely to be particularly relevant given the significance of the recent corporate restructure and the impact of this on allocated corporate overheads.

As outlined in section 7.5.3, the QCA is also minded to consider a broader alternative approach to recognising costs associated with providing access to the declared service for non-coal traffic, potentially at the total allowable revenue level.

QCA assessment

The QCA considers that Aurizon Network's proposed 2017 DAU allocators for shared corporate costs are generally reasonable, subject to:

- Updating the proposed FTE allocator to 16.1 per cent, reflecting more recent data.
- Applying a revised method for allocating shared IT costs.
- Adjusting allocations for operational sites to reflect sites to be decommissioned.

[507] QRC, sub. 53: 25.
[508] Some specific exclusions have been applied, as discussed in section 7.11.

The QCA does not consider it appropriate to adopt Aurizon Network's suggestion to revise its corporate cost allocators in light of its corporate restructure, as proposed in its March 2018 submission. Nonetheless, the QCA's decision to adopt a transitional reclassification of Infrastructure Delivery overheads, along with using the 2015–16 base year for system-wide and regional costs, and the capital indicator, ensures that Aurizon Network is appropriately compensated for both the direct costs, and shared overheads associated with the Infrastructure Delivery and Infrastructure Engineering functions.

The QCA's conclusions on appropriate corporate overhead allocation rates are set out in Table 47.

Table 47 QCA assessment of allocators for corporate overheads

Allocator	*Aurizon Network proposed (%)*	*QCA assessment (%)*
Direct costs	24	24
FTE	15.8	16.1
Finance—accounts payable	14	14
Finance—accounts receivable	31	31
Specific	100	100

7.6.4 Step changes

Aurizon Network's proposal

At the time of submitting its 2017 DAU proposal, Aurizon Network occupied office space at 192 Ann Street, Brisbane under a licence agreement with Aurizon Operations. Aurizon Network said that it paid a licence fee equal to the commercial rent paid by Aurizon Operations for the premises.[509] Aurizon Operations also occupied office space at 175 Eagle Street, Brisbane.

The Aurizon group announced in 2015 that it would consolidate its two Brisbane corporate premises, to a new headquarters at 900 Ann Street from September 2018. Aurizon Network's proposed corporate overhead allowance includes rent and other tenancy costs, such as utility charges, outgoings, compliance reporting, land tax, repairs and maintenance for its share of 900 Ann Street costs, in place of 192 Ann Street from September 2018.[510]

In total, the corporate office consolidation results in allocated incremental costs for Aurizon Network of around $1.7 million ($2015–16) over the UT5 pricing period, compared with the current tenancy arrangements. The proposed step change in costs commences in 2018–19.

Aurizon Network did not identify any further step changes in corporate costs to occur during the UT5 pricing period. Other proposed incremental allocations of costs (operational sites and electrical asset consumption and maintenance) are addressed in section 7.6.3.

QCA analysis and assessment

The QCA reviewed internal Aurizon group documentation, which outlines the evaluation of options and describes implementation plans relating to the corporate office consolidation. The QCA understands that the decision to consolidate the Aurizon group's Brisbane premises was

[509] Aurizon Network, sub. 1: 230.

[510] Costs were allocated to Aurizon Network at a rate of 25%, based on the proportion of Aurizon Network employees to total number of desks.

made to ensure that head office accommodation aligns with and supports its corporate strategy, and to improve collaboration across the business.[511]

Anglo American considered that there was insufficient detail in Aurizon Network's proposal to determine whether the costs of leasing arrangements are reasonable and prudent. Anglo American said Aurizon Network should disclose the costs of its tenancy arrangements. [512]

Based on information supplied by Aurizon Network, the corporate office consolidation will deliver a substantial reduction in total occupancy costs to the Aurizon group over the 10-year lease period, compared with maintaining the current tenancies.[513] However, the portion of shared occupancy costs allocated to the network business is expected to increase.

AECOM reviewed the proposed costs and formed the view that any cost reduction available to the Aurizon group should be passed on proportionally to Aurizon Network. AECOM concluded that rental costs at 192 Ann St would have otherwise continued to increase at a contracted rate of 3.5 per cent per annum. AECOM considered this to be a reasonable alternative estimate, while noting that it would be preferable for Aurizon Network to receive a reduction in occupancy costs in line with that being gained by the Aurizon group.[514]

In the draft decision, the QCA expressed a preliminary view that Aurizon Network had not justified the inclusion of this proposed increase in accommodation costs. While consolidation of its corporate headquarters may be a prudent commercial decision for the Aurizon group, it is a discretionary strategic decision; the resulting costs of which we do not consider would reasonably be included in Aurizon Network's efficient cost base if it were a stand-alone entity.

The QCA considered it not appropriate to accept the proposed step change for costs associated with the corporate office consolidation. We accepted AECOM's advice and considered that a reasonable forecast of Aurizon Network's tenancy costs should reflect its current rent costs, escalated by the annual rental increase of 3.5 per cent, as prescribed in the existing agreement. All other outgoings such as electricity consumption and corporate contracts were escalated by forecast inflation of 2.37 per cent per year.

The QRC shared the view that cost reductions should be passed proportionally to Aurizon Network. However the QRC questioned why the QCA and AECOM had derived the alternative cost estimate based on an escalation of current tenancy costs, rather than a method that allocates the lower forecast cost to be realised by the Aurizon group.[515]

The QCA considered the QRC’s suggested approach of allocating the forecast lower tenancy costs to be realised by the group as a whole. However, in the interests of transparency and simplicity, the QCA considered that AECOM’s approach of escalating the current tenancy costs at 192 Ann Street was appropriate. In our view this delivers a reasonable allowance, while avoiding an outcome whereby Aurizon Network’s customers bear higher costs while other Aurizon group business units realise cost savings.

Aurizon Network disagreed with the QCA's approach and submitted that its proposed tenancy costs should be considered reasonable, as long as it operates within its overall spending allocation, and is incentivised to manage its costs and deliver efficiencies.[516] Aurizon Network

[511] Aurizon Network, Response to QCA request for information #63, 22 May 2017: 6.
[512] Anglo American, sub. 18: 13.
[513] Aurizon Network, Response to QCA request for information #63, 22 May 2017: 17.
[514] AECOM 2017b: 37.
[515] QRC, sub. 53: 26.
[516] Aurizon Network, sub. 40: 173.

provided further information to support its proposal, including an updated KPMG benchmarking report on Brisbane CBD and city fringe commercial tenancy costs.[517] Aurizon Network argued that the proposed cost for 900 Ann Street is efficient and within the range for rents paid by large ASX listed companies in the CBD fringe. It noted an example of a recent lease contract for an ASX listed company at 180 Ann Street which was struck at a higher price than Aurizon's 900 Ann Street tenancy.[518]

Aurizon Network also advised that the relocation to 900 Ann Street had been brought forward to June 2018–three months earlier than originally proposed. Aurizon Network suggested that the proposed rental costs for the existing tenancy at 192 Ann Street be adjusted to reflect an additional three months of rent, in recognition that the vacant premises is unlikely to be sub-leased for such a short period.[519]

AECOM reviewed Aurizon Network's updated tenancy costs and maintained its view that any cost reduction available to the Aurizon group from consolidation should be passed on proportionally to Aurizon Network.[520] AECOM considered that a 3.5 per cent annual escalation of 192 Ann Street tenancy remained an appropriate rental allowance.

The QCA agrees that it is not an appropriate outcome for the corporate consolidation to result in increased tenancy costs for Aurizon Network while delivering overall cost savings to the group. We consider it appropriate to adopt AECOM's approach of escalating the current 192 Ann Street tenancy costs by 3.5 per cent, with other outgoings (cleaning, security etc.) escalated by forecast inflation of 2.37 per cent per year.

The QCA does not consider it appropriate to include an additional allowance for 3 months of rent overlap, as suggested by Aurizon Network in its March 2018 submission.

As the QCA has stated previously, the decision to consolidate and relocate is a strategic business decision of the integrated entity, intended to deliver efficiencies to the group. We do not consider that Aurizon Network as a stand-alone efficient entity would contemplate such a decision in the absence of efficiencies. Relevantly, Aurizon Network has not provided cost-benefit analysis or other evidence indicating that efficiencies will flow to the network business as a result of the corporate consolidation. As such, to the extent that Aurizon Network's costs increase due to this strategic business decision of its parent company, we consider such costs should be borne by the company rather than recovered from Aurizon Network's customers. Moreover, we would expect any short-term increases in costs to be offset, over time, by efficiencies arising from the consolidation.

The QCA's decision provides an appropriate allowance for tenancy costs based on Aurizon Network hypothetically maintaining its tenancy at 192 Ann Street for the duration of the UT5 pricing period, including allowance for escalation of costs. The QCA considers this is a reasonable approach that adequately compensates Aurizon Network for corporate accommodation costs that would otherwise be incurred if it were an efficient stand-alone entity.

Aurizon Network also proposed to increase its allocation of corporate tenancy costs to reflect the impact of the corporate restructure, which introduced additional Brisbane-based FTEs to Aurizon Network's real estate footprint. The QCA does not consider this suggested adjustment

[517] Aurizon Network, sub. 47.
[518] Aurizon Network, sub. 40: 173.
[519] Aurizon Network, sub. 40: 173–174.
[520] AECOM 2018: 27–28.

is appropriate. The QCA's transitional approach to recognising the impacts of the corporate restructure, along with using 2015–16 as the base year for system-wide and regional costs, provides appropriate compensation for corporate costs incurred in the post-restructure cost environment.

Transformation program savings

In its review of supplementary information provided by Aurizon Network, AECOM identified a range of opportunities for cost savings over the UT5 pricing period, which were not identified in Aurizon Network's 2017 DAU proposal. These potential savings relate to ongoing initiatives of the Aurizon group's transformation program, including renegotiation of outsourced contracts, and re-evaluating incentive payments.[521] AECOM proposed a negative step change to reflect some of these potential efficiencies during the UT5 pricing period.

Aurizon has categorised its transformation program initiatives as:

- evaluating
- locked-in
- implementing, or
- cash-flowing.[522]

AECOM recommended that all projected savings associated with those initiatives labelled as 'locked-in', 'cash-flowing' and 'implementing', be included as a negative step change. For initiatives identified as 'evaluating', AECOM assumed that not all of these would actually be implemented. AECOM noted:

> Some savings are likely to be achievable, however, and it seems reasonable in principle to provide Aurizon Network with an incentive to achieve greater efficiencies where they are possible. We therefore suggest that 50% of the proposed savings be included for the next regulatory period, to encourage Aurizon Network to continue their drive for efficiency improvements, and that a true-up be undertaken at the end of the UT5 period.[523]

AECOM recommended that a total of $9.3 million ($2015–16) in transformation initiative savings be included as a negative step change across the UT5 pricing period.

The QCA considers that some of the anticipated savings from ongoing transformational activities should be reflected in the forecast corporate overhead allowance. We agree that the projected savings identified as 'cash-flowing', 'locked in', and 'implementing' should be fully included in the negative step change.

With regard to initiatives still under evaluation, the QCA accepts that not all of these measures will come to fruition and deliver savings. In recognition of this, the QCA agrees with AECOM and considers it appropriate to include 50 per cent of these savings in the negative step change.

Aurizon has incentives to implement its transformation initiatives and realise efficiency gains. We consider incorporating this step change reinforces those incentives, while appropriately balancing the legitimate business interests of Aurizon Network, the interests of access seekers, access holders and the public interest, in accordance with s. 138(2) of the QCA Act.

While AECOM recommended that an *ex post* true-up of these savings occur at the end of the regulatory period, we do not consider this is necessary. To the extent that Aurizon Network is

[521] AECOM 2017b: 40.
[522] Aurizon Network, Response to QCA request for information #48 (7 April 2017).
[523] AECOM 2017b: 40.

able to achieve cost savings greater than the negative step change applied, these should be reflected in the base year expenditure for the subsequent pricing period. Likewise, if actual savings fall short of the negative step change, base year expenditures should also capture this.

Accordingly, the QCA formed a preliminary view in its draft decision to apply a negative step changes of $10 million in aggregate over the UT5 pricing period (nominal, after allocation). The QRC supported the proposed approach.[524]

In its March 2018 submission, Aurizon Network acknowledged the QCA's adjustments for transformation savings, however it submitted revised savings relating to an initiative to reduce external safety training costs. Aurizon Network noted that around half of the transformation savings included in the QCA's draft decision related to this initiative and the potential benefits of the initiative are expected to be lower than initially advised.[525] Aurizon Network also advised that the benefits of this initiative had been reassigned to a different functional area and any savings would now accrue directly to Aurizon Network, rather than flowing through to Aurizon Network as a corporate cost saving.[526]

Aurizon Network submitted that the projected savings should be reduced by $4.1 million over the period and proposed to reallocate the revised savings to the system-wide and regional costs (Permanent Way development training) as a negative step change.[527]

AECOM reviewed Aurizon Network's suggested revisions and considered them reasonable. AECOM noted that potential annual savings of $2 million per year from 2017–18 were overstated given that actual Permanent Way development training costs incurred in 2016–17 were $1.9 million.[528]

The QCA reviewed Aurizon Network's revised transformation savings and finds the suggested revisions appropriate. Revised transformation savings for Permanent Way development training have been included as a negative step change in the system-wide and regional operating cost allowance, accruing fully to Aurizon Network (section 7.5.4).[529]

QCA assessment

The QCA's conclusion on step changes in allocated corporate overhead costs is set out in Table 48. This includes a negative step change to reflect the budgeted costs of two operational sites to be decommissioned during the UT5 pricing period, and a correction for double-counting of some housing real estate costs (section 7.6.3).

Table 48 QCA assessment of step changes in allocated corporate overheads ($m)

Step changes	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*UT5 total*
Escalation of corporate accommodation costs	0.08	0.12	0.17	0.21	0.58
Transformation savings	(1.26)	(1.42)	(1.51)	(1.54)	(5.73)
Decommissioned operational sites	(0.13)	(0.13)	(0.14)	(0.14)	(0.54)

524 QRC, sub. 53: 26.
525 Aurizon Network, sub. 40: 174.
526 Aurizon Network originally attributed 80 per cent of these potential savings to the network business.
527 Aurizon Network, sub. 40: 174.
528 AECOM 2018: 29.
529 Negative step-change is netted-off the positive step-change for 'Permanent Way development training' within the Business Management cost centre identified as 'VP Network Operations'.

Step changes	2017–18	2018–19	2019–20	2020–21	UT5 total
Removal of double-counted RFM housing costs	(0.29)	(0.30)	(0.30)	(0.31)	(1.20)
Total step changes for corporate overheads	**(1.60)**	**(1.73)**	**(1.78)**	**(1.78)**	**(6.89)**

Note: Based on allocators set out in Table 47, except corporate accommodation which is allocated to Aurizon Network at a rate of 25%, representing the proportion of Aurizon Network employees to total number of desks prior to the corporate restructure. Adjustments for STI key management personnel bonuses are considered a base year adjustment, and are addressed in section 7.6.2.

In the QCA's view, the role of the base-step-trend method is to establish an appropriate operating expenditure allowance within which Aurizon Network can prudently and efficiently operate its business during a regulatory pricing period. Forecasting expenditures using the base-step-trend approach should not be an exercise in identification and recovery of all anticipated business-as-usual costs and savings, or a supplementary cost pass-through mechanism.

The QCA has not applied a rigid materiality test in assessing step changes for this investigation. This is in recognition that Aurizon Network's base-step-trend method is still maturing, and efficient costs will continue to be revealed over time. In future, the QCA's assessment intends to place greater emphasis on the drivers of proposed step changes and the materiality of incremental costs and savings.

7.6.5 QCA assessment—corporate overheads

The QCA has considered each component of Aurizon Network's proposed corporate overhead allowance and has formed the view that the proposed allowance would provide for recovery of more than efficient costs. Having regard to the factors in s. 138(2) of the Act, the QCA considers this is not appropriate. Consequently, the QCA has developed an alternative corporate overhead allowance that it considers appropriate. The QCA's assessment of the allowance for corporate overheads is set out in Table 35.

The QCA's estimate is derived by making the following adjustments to Aurizon Network's proposed costs:

- substituting proposed 2014–15 base year costs with 2015–16 costs
- removal of proposed cash bonus adjustments from 2015–16 base year costs
- increase to reflect the impact of an updated FTE allocator
- removal of allocated incremental costs due to corporate office consolidation
- adopting a revised IT cost allocator
- reductions to reflect operational sites to be decommissioned, double-counting, and identified savings from transformation initiatives
- transitional reclassification of previously capitalised Infrastructure Delivery corporate overheads associated with the corporate restructure
- application of the QCA's CPI inflation forecast and updated WPI inflation forecasts (section 7.10).

The QCA's approved allowance for corporate overheads is around $33 million or 20 per cent higher than the draft decision allowance. This is driven primarily by the impact of accepting revised allocators for IT costs (increase of $17 million), revised transformation savings projections (increase of $4 million) and the transitional opex-funded restructure allowance provided in 2019–20 and 2020–21 (increase of $13 million), and removal of double counting of housing costs (reduction of $1 million).

Table 49 QCA assessment of Aurizon Network's allocated corporate overhead costs ($m)

	2017–18	*2018–19*	*2019–20*	*2020–21*	*Total*
Corporate overhead allowance (allocated)	45.15	46.15	47.36	48.64	187.30
Opex-funded restructure allowance	-	-	6.51	6.51	13.02
Total	**45.15**	**46.15**	**53.87**	**55.15**	**200.32**

Totals may not add due to rounding.

7.7 Risk and insurance allowances

7.7.1 Aurizon Network's proposal

Aurizon Network's proposed risk and insurance arrangements consist of a combination of commercial insurance policies, self-insurance premiums for uninsured risks and below-deductible insured risks, and pass-through (review event) provisions.

Aurizon Network engaged Jardine Lloyd Thompson (JLT) and Finity Consulting (Finity) to estimate the proposed insurance and self-insurance allowances, respectively. Redacted versions of the reports prepared by these consultants are available on the QCA's website.

Aurizon Network's proposed risk and insurance allowances are set out in Table 50 below.

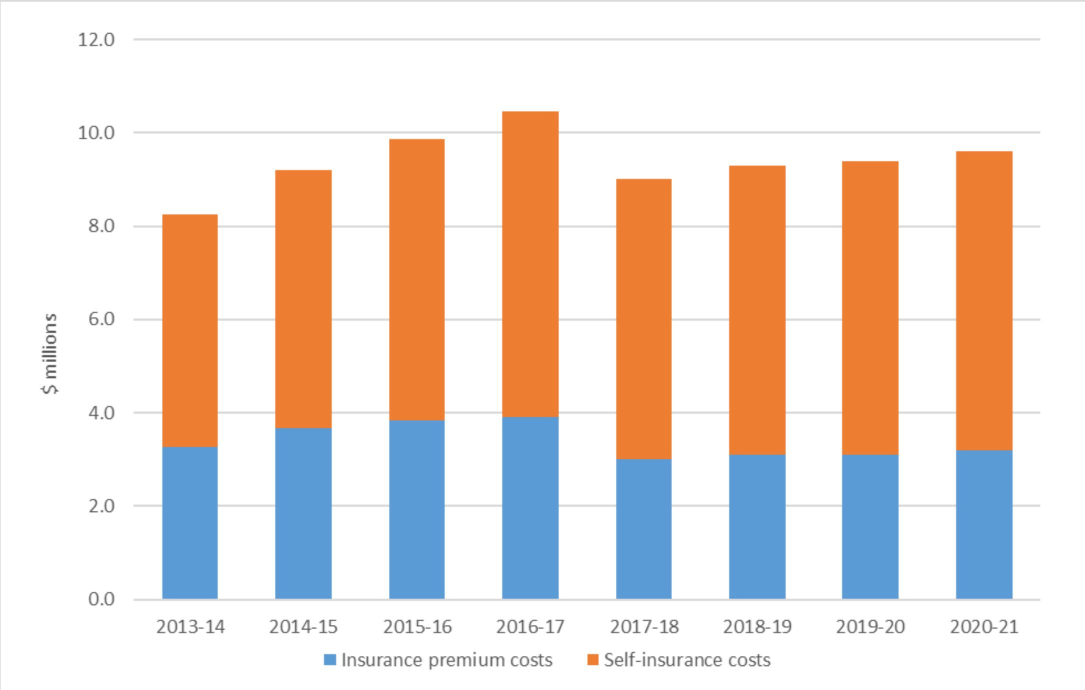
Table 50 Aurizon Network's proposed risk and insurance costs ($m)

Proposed allowances	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total*
Commercial insurance costs	3.04	3.08	3.12	3.16	12.40
Self-insurance costs—uninsured and retained risks	6.00	6.15	6.29	6.45	24.89
Total risk and insurance costs	**9.04**	**9.23**	**9.41**	**9.61**	**37.29**

Source: Aurizon Network, UT5 Indicative Premium Summary (including statutory charges) as at 20 September 2016 (spreadsheet).

The proposed costs amount to $37 million. Aurizon Network stated that this is seven per cent lower, in real terms, than the approved UT4 allowances. Figure 17 compares Aurizon Network's proposed UT5 risk and insurance allowances with the approved UT4 allowances.

Figure 17 Approved and proposed risk and insurance allowances ($m)



Sources: QCA 2016c, Volume IV, Maximum Allowable Revenue: 88; Aurizon Network, sub. 10: 8; Aurizon Network, sub. 11: 16.

Table 51 summarises Aurizon Network's proposed insurance arrangements. Base premiums represent premiums before statutory charges such as the terrorism levy and stamp duty.

Table 51 Proposed insurance and risk management arrangements

Risk	***Estimated annual base premium (at September 2016)***	***Assumptions***
Industrial special risks (ISR)	$1,155,457	Limited key infrastructure commercially insured - Assumes $100,000 deductible ($1 million deductible for rollingstock).
General liability	$648,000	Assumed commercial insurance. $500,000 deductable on each and every loss.
Director and officer liability	$407,000	Assumed commercial insurance, with deductible of $250,000 (Company reimbursement) and $1 million (Securities claims).
Civil liability professional indemnity	$55,000	Assumed commercial insurance, with $50,000 deductible.
Employment practices liability	$6,000	Assumed commercial insurance, with $50,000 deductible.
Terrorism—rollingstock only	$58,014	Assumed commercial insurance, with $500,000 deductible.
Corporate travel	$7,500	Assumed commercial insurance—various sub-limits and deductibles.
Crime	$25,000	Assumed commercial insurance, with $250,000 deductible.
Marine cargo	$115,000	Assumed commercial insurance to $20 million,

Risk	*Estimated annual base premium (at September 2016)*	*Assumptions*
		with $50,000 deductible.
Contract works—material damage and third party liability	$239,876	Assumed commercial insurance, with deductibles of between $25,000 and $150,000.
Weather-related losses—force majeure events	$371,000	Self-insured to $1 million. Claims over $1 million subject to cost pass-through.
Derailment	$3,297,000	Self-insured.
Dewirement	$304,000	Self-insured.
Third-party repairs	$202,000	Self-insured.
Liability losses (below-deductible)	$495,000	Self-insured.[530]

Sources: Aurizon Network, sub. 11; Aurizon Network, sub. 10; Aurizon Network, sub. 1: 240.

Commercial insurance costs

Aurizon Holdings has insurance coverage for a range of risks, through commercial policies placed with its captive insurer, Iron Horse Insurance Company Pty Ltd. It also holds other polices placed directly with the Australian insurance market. The QCA understands that these policies provide cover to Aurizon Holdings subsidiaries for property and general liability, employment practices liability, directors and officers liability, professional indemnity, corporate travel, terrorism and industrial special risks (ISR).

Aurizon Network said that, while it does receive coverage under these policies, premiums paid reflect all of the activities of the Aurizon group and separate premiums are not established for the Aurizon Network subsidiary business. Aurizon Network engaged JLT to estimate commercial premiums that might apply if Aurizon Network were a stand-alone entity.

In addition, Aurizon Network proposed allowances for the following additional premiums that were not included in its UT4 insurance allowance:

- marine cargo—covers Aurizon Network for its exposures to loss or damage to goods whilst being transported or in transit
- contract works—covers material damage and third party liability (premium is based on the value of assets under construction)
- crime—cover for loss arising from employee dishonesty, forgery and third party computer and funds transfer fraud.

JLT also estimated a premium for motor vehicle insurance, however Aurizon Network confirmed that it did not include an allowance for this premium in its proposal.

Table 52 illustrates the proposed base premiums for the UT5 pricing period compared with the proposed UT4 equivalent costs. This illustrates that while a number of premiums have increased, the base premiums in aggregate are less than those proposed for the UT4 pricing period.

[530] Aurizon Network's submission noted that liability losses in excess of $8 million would be subject to pass-through; however, it later clarified this is not accommodated under the 2017 DAU.

Table 52 Changes in estimated commercial insurance costs from UT4—base premiums

Commercial insurance policies	***Proposed base premiums ($)***		
	UT4 (2012–13)	***UT5 (2016–17)***	***% change***
General liability	633,262	648,000	2
Industrial special risks (ISR)	2,276,277[a]	1,155,457	–49
Directors and officers liability	290,956	407,000	40
Civil liability and professional indemnity	27,062	55,000	103
Employment practices liability	3,033	6,000	98
Terrorism	Included in ISR premium	77,903[b]	n/a
Corporate travel	3,355	7,500	124
Marine cargo, contract works, crime	0	379,876	n/a
Total	**3,233,945**	**2,736,736[c]**	**–15**

a Includes estimated terrorism insurance policy premium and terrorism levies applied to ISR policies.

b Includes estimated terrorism levies applied to ISR policies.

c Includes estimated terrorism levies on ISR policies of $19,889.

Note: All base premium costs exclude GST and stamp duty.

Source: Aurizon Network 2013a: 263–264; Aurizon Network, sub. 11; Aurizon Network, UT5 Indicative Premium Summary (including statutory charges) as at 20 September 2016 (spreadsheet).

Table 53 sets out Aurizon Network's proposed notional commercial insurance premiums for the UT5 pricing period. These premiums include a statutory terrorism levy of 2.6 per cent of the industrial special risk premium (excluding rolling stock), and stamp duty of nine per cent applied to all premiums.[531] Aurizon Network's proposed premiums do not include GST.

Consistent with the UT4 approach, Aurizon Network identified the proportion of ISR costs associated with feeder stations, to enable these costs to be allocated to the operating expenditure allowance for electric assets.

To establish notional premiums for each year of the period, Aurizon Network indexed JLT's 2016–17 base estimates (including statutory charges) by forecast CPI inflation.[532] The proposed commercial insurance costs amount to $12.4 million over the UT5 pricing period.

Notwithstanding increases in some individual policy estimates, and the inclusion of premiums for additional policies, the total estimated cost of commercial insurance over the UT5 pricing period is lower than the approved UT4 allowance.

[531] For more information on the statutory terrorism levy, see Aurizon Network, sub. 11.

[532] JLT applied escalation based on an estimate of forecast change in the ABS Insurance and Financial Services index, however this was not adopted by Aurizon Network.

Table 53 Proposed commercial insurance costs—notional premiums ($m)

Commercially insured risk	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total*
Industrial special risks	1.31	1.32	1.34	1.36	5.33
Non-electric	0.88	0.89	0.90	0.91	3.57
Electric (feeder stations)	0.43	0.44	0.44	0.45	1.76
General liability	0.72	0.73	0.74	0.75	2.94
Directors and officers liability	0.45	0.46	0.46	0.47	1.84
Civil liability professional indemnity	0.06	0.06	0.06	0.06	0.25
Marine cargo	0.13	0.13	0.13	0.13	0.52
Contract works	0.27	0.27	0.27	0.28	1.09
Employment practices liability	0.01	0.01	0.01	0.01	0.03
Terrorism—rollingstock only	0.06	0.07	0.07	0.07	0.26
Corporate travel	0.01	0.01	0.01	0.01	0.03
Crime	0.03	0.03	0.03	0.03	0.11
Total	**3.04**	**3.08**	**3.12**	**3.16**	**12.40**

Note: Totals may not add due to rounding. Values represent notional premiums, inclusive of statutory charges (assumed terrorism levies, and stamp duty).

Sources: Aurizon Network, sub. 1: 238; Aurizon Network, UT5 Indicative Premium Summary (including statutory charges) as at 20 September 2016, unpublished spreadsheet; QCA analysis.

Self-insurance costs

Aurizon Network proposed to self-insure for a number of uninsured risks, and below-deductible losses on some insured risks.

Aurizon Network said that its below-deductible self-insured losses relate to deductibles on insured risks where it has material levels of retained risk, either due to the frequency or size of losses, for example, property and public liability losses.[533]

Aurizon Network's uninsured risks primarily relate to tracks and associated infrastructure that commercial insurance markets typically do not have the appetite to underwrite.[534] Aurizon Network proposed self-insurance allowances for the following uninsured risks:

- derailment
- dewirement
- weather damage (storms, floods and extreme heat)
- third-party repairs.

Aurizon Network proposed to include a self-insurance allowance for third party repairs, which was not included in the UT4 pricing period. This allowance relates to the cost of repairing

[533] Aurizon Network, sub. 1: 239.
[534] Aurizon Network, sub. 1: 239.

damage to the network caused by third parties, net of any recovery made against the responsible party.[535]

Aurizon Network engaged Finity to estimate allowances for these self-insured risks. Finity's estimation approach is largely the same as that used to estimate Aurizon Network's proposed UT4 premiums.

Finity estimated future losses for each risk based on historical observations, and derived notional insurance 'premiums' by adding to the base costs a 10 per cent loading for expenses (applying to derailment losses only) and a 20 per cent loading for profit and the net cost of reinsurance.

Table 54 sets out Finity's estimated total projected self-insured losses (before application of loadings) compared with the equivalent UT4 estimates.

Table 54 Finity's projected self-insured losses (before loadings)

Risk	***Total projected losses ($m)***		
	UT4	UT5	% change
Derailment	16.26	13.64	-16
Dewirement	0.73	1.27	74
Weather-related losses	3.41	1.54	-55
Third party repairs	n/a	0.84	n/a
Liability (below-deductible losses)	1.94	2.10	8
Total	**22.34**	**19.38**	**-13**

Note: Values represent base premiums and are net of loadings for expenses and profits.

Sources: Aurizon Network, sub. 10: 41; Finity 2013: 38.

Finity noted that its estimate of projected losses for the UT5 pricing period is lower than that assumed for the UT4 pricing period. Finity said this is largely due to:

- increased emphasis on preventative maintenance and rail restressing in recent years which has seen the frequency of low-severity derailments trending downwards, relative to medium- and high-severity events
- the net cost of weather-related events has decreased due to a greater incidence of events captured by pass-through provisions (that is, relatively fewer events with costs below the pass-through threshold).[536]

Table 55 sets out Aurizon Network's proposed notional self-insurance premiums for the UT5 pricing period, inclusive of a 10 per cent loading for expenses (applied to derailment losses only) and a 20 per cent loading for profit and the net cost of reinsurance.

[535] Aurizon Network, sub. 10: 36.
[536] Aurizon Network, sub. 10: 42.

Table 55 Proposed self-insurance costs—notional premiums ($m)

Self-insured risk	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total*
Derailment	4.35	4.45	4.55	4.65	18.00
Dewirement	0.36	0.38	0.39	0.39	1.52
Weather-related losses	0.45	0.46	0.47	0.48	1.84
Third party repairs	0.24	0.25	0.25	0.26	1.00
Liability (below-deductible losses)	0.59	0.63	0.64	0.67	2.52
Total	**6.00**	**6.15**	**6.29**	**6.45**	**24.89**

Note: Numbers may not sum due to rounding.

Source: Aurizon Network, sub. 10: 43.

7.7.2 QCA analysis and assessment

When assessing Aurizon Network's proposed risk and insurance costs, we have had regard to the factors set out in s. 138(2) of the QCA Act and weighed them appropriately in our assessment.

The QCA considers that it is in the legitimate business interests of Aurizon Network that it be permitted to recover reasonable costs associated with maintaining a prudent insurance program. We accept that Aurizon Network's insurance and risk arrangements for the CQCN may include a combination of corporate insurance premiums, self-insurance and cost pass-through (review event) arrangements. However, we do not consider Aurizon Network's proposed allowance reasonable.

The QRC and Anglo American also expressed concerns with Aurizon Network's proposed insurance costs.[537] The QRC questioned whether losses of access charge revenue were included in the projected losses,[538] however the QCA has confirmed that this is not the case.

The QCA's considerations and assessments of reasonable allowances for risk and insurance costs are set out below.

Self-insurance

The QCA has considered Aurizon Network's proposal and Finity's actuarial analysis and considers the approach is generally reasonable for forecasting the value of uninsured losses. We note that projected self-insured losses are lower in aggregate compared with the UT4 approved allowances. This decrease appears to be largely driven by the impact of recent rail stressing and preventative maintenance activities on the frequency and severity of derailment events.

Notwithstanding this overall reduction, the QCA has some concerns with Aurizon Network's proposed self-insurance costs, as discussed below.

Formalising the self-insurance function

While self-insurance can play an important role in a prudent insurance program, the QCA considers it should be appropriately recognised and endorsed by Aurizon Network’s board.

[537] QRC, sub. 21: 50; Anglo American, sub. 18: 23, 25.
[538] QRC, sub. 53: 26.

In previous decisions, the QCA clearly articulated what it considered was a necessary set of criteria to be met to establish a formal self-insurance program.[539] These criteria included providing a board resolution to self-insure the identified risks.

While Aurizon Network's 2017 DAU proposal did not meet these criteria, Aurizon Network subsequently offered to provide the QCA with a resolution from its board, endorsing the proposed self-insurance program for the UT5 pricing period.[540] Aurizon Network indicated that the resolution would be conditional on the QCA's final decision including a self-insurance allowance that is in line with Aurizon Network's submission, and includes allowance for both reinsurance costs and profit margins.[541]

In April 2018, the QCA wrote to Aurizon Network requesting that it expedite the process of supplying the board resolution that it had foreshadowed in its March 2018 submission. The QCA made clear that its consideration of Aurizon Network's proposed self-insurance allowance was ongoing and it could not provide any assurances regarding the quantum of any self-insurance allowance that might ultimately be approved in the QCA's decision.

On 21 June 2018, Aurizon Network provided the QCA with evidence of its board resolution.[542] The resolution identifies the risks that Aurizon Network proposed to self-insure for the UT5 pricing period. These risks are consistent with those proposed in the 2017 DAU. However, the board endorsement of the self-insurance program is conditional on the QCA approving a self-insurance allowance that includes profit margins and reinsurance costs.

The QCA considers this conditional endorsement is not appropriate. In the QCA's view, the board resolution provided does not demonstrate a clear commitment to the self-insurance program, or a genuine demonstration to access holders and access seekers of Aurizon Network's capacity and willingness to credibly self-insure.

Loadings for profits and reinsurance

In addition to projected self-insurance costs based on historical average losses, Aurizon Network's 2017 DAU proposal sought to include costs to manage its self-insurance program. These costs include a margin of 20 per cent for profits and reinsurance costs, and a 10 per cent loading for expenses (applied to derailment losses only).

These loadings are applied to derive an estimated notional insurance 'premium' associated with the uninsured losses. Finity said that these loadings are based on commercial property insurance benchmarks and can vary based on the type and uncertainty of the insured risks, and the stage of the insurance market cycle, however; it considered these loadings typical of those that might apply for this type of large commercial business.[543]

In justifying the inclusion of these loadings, Finity said that the profit margin adopted is similar to the average return on capital achieved by Australian general insurers in recent years. Finity also said:

539 For example, the QCA's draft decisions on the 2005, 2009 and 2010 DAUs.
540 Aurizon Network, sub. 40: 179.
541 Aurizon Network, sub. 40: 179.
542 Aurizon Network has claimed confidentiality over this document.
543 Aurizon Network, sub. 10: 42.

> We also note that unlike an insurer, Aurizon only gets the opportunity to "re-price" every four years whereas an insurer has the opportunity to re-price annually thus providing greater certainty as they can re-adjust premiums to recoup losses.[544]

The QCA did not consider the inclusion of loadings for profit and reinsurance in the draft decision. We formed the preliminary view that Aurizon Network should first demonstrate its commitment to formalising its self-insurance program, including through the recognition and endorsement of that function by its board of directors. The QRC supported this approach.[545]

As noted above, the QCA considers Aurizon Network's conditional endorsement of its self-insurance program is not reasonable and does not represent a clear commitment to its proposed self-insurance program. As such, the QCA considers it does not reasonably reflect the interests of access holders and access seekers under s. 138(2) of the QCA Act.

In any event, the QCA has broader concerns regarding the conceptual basis for including these loadings in an efficient allowance for Aurizon Network's self-insured costs. We note that Aurizon Network's proposed self-insurance allowance covers:

- Uninsured risks related to tracks and associated infrastructure—Aurizon Network noted that these risks are subject to losses that commercial insurance markets typically do not have the appetite to underwrite.[546]
- Below-deductable losses on insured risks where a material level of risk is retained, either due to the frequency of such losses or the size of the retention (for example, property and public liability losses).[547]

The characteristics of these categories of losses are relevant when considering the inclusion of margins for profits and reinsurance in an efficient self-insurance allowance. In this regard, the QCA notes:

- Reinsurance is a commercial insurance product that allows insurers to spread the risk of claims against the policies they sell. In the QCA's view, given that Aurizon Network's proposed self-insurance program primarily relates to risks that are not insurable commercially, it stands to reason that reinsurance is also unlikely to be available. This being the case, it is not clear how reinsurance represents an efficient cost to Aurizon Network in these circumstances.
- Reinsurance is used commercially to cap exposure to very large losses that could not be fully funded by the primary insurer itself. The QCA notes that the review event provisions within Aurizon Network's 2017 DAU (which are subject to a fixed, non-indexed materiality threshold of $1 million) already offer significant insulation from most large losses, and these provisions effectively perform a similar function.
- Self-insurance is also undertaken where a business deems it more cost effective to fund losses itself, rather than through commercial insurance. On this basis, estimated efficient self-insurance 'premiums' should necessarily be lower than an equivalent hypothetical commercial insurance premium. In the QCA's view, the self-insurance allowance should estimate the efficient cost to the business of funding uninsured losses, rather than

[544] Aurizon Network, sub. 10: 43.
[545] QRC, sub. 53: 26.
[546] Aurizon Network, sub. 1: 239.
[547] Aurizon Network, sub. 1: 239.

attempting to estimate the hypothetical cost of commercial insurance products that the market is unwilling to provide.

Given these concerns, it is not clear that the efficient cost of self-insuring the risks proposed by Aurizon Network should include margins for reinsurance and profit. As such, the QCA considers it appropriate to approve an allowance equal to the value of projected uninsured losses only, excluding margins for profit and reinsurance, but including reasonable expenses for derailments. The QCA considers this appropriate having regard to the factors at s. 138(2) of the QCA Act, as it represents an appropriate balance between the legitimate business interests of Aurizon Network and the interests of users. By providing an allowance based on actual average historical losses including expenses, the QCA's decision also ensures that Aurizon Network recovers at least the efficient costs of funding its uninsured losses over time.

As a general observation, the QCA considers the majority of Aurizon Network's self-insured losses are more akin to unplanned or corrective maintenance and operating costs. As such—and given Aurizon Network’s reluctance to provide a clear commitment to implementing a credible and genuine self-insurance function—the QCA suggests that Aurizon Network consider treating them accordingly in future.

The QCA suggests that, in the event Aurizon Network is able to provide additional information that satisfactorily addresses the QCA's concerns, it may request the QCA to reconsider these matters through a DAAU process.

Escalation of losses

Under Finity's estimation approach, projected losses for derailment and dewirement are sensitive to forecast volumes, as a measure of exposure. Similarly, Finity's method uses company turnover as a measure of exposure in projecting liability losses. In its March 2018 submission, Aurizon Network considered it would be appropriate to re-forecast future losses to include any revised forecast tonnes, prior to the final approval of the 2017 DAU.[548]

The QCA has updated the projected derailment and dewirement losses based on revised volume forecasts (Chapter 6), and Finity's per-unit measures of exposure.[549] The QCA also requested updated company turnover projections which have been used to adjust the forecast liability losses, by applying Finity’s relevant per-unit measure of exposure.

In order to inflate historical average losses to nominal terms for the UT5 pricing period, Aurizon Network applied the maintenance cost index (MCI) to all categories of historical losses. Aurizon Network said that this reflects that the expected costs of rectifying future losses are all inherently linked to maintenance tasks.[550] While the majority of losses would reasonably require restorative measures akin to maintenance activities, the QCA does not consider this necessarily true for liability losses. In our view, liability losses would be more appropriately escalated by forecast CPI inflation than MCI. Accordingly, the QCA has escalated base liability losses by forecast inflation of 2.37 per cent per year, with all other categories of losses escalated by forecast MCI over the UT5 pricing period.

Commercial insurance

The QCA has considered Aurizon Network's proposal and the JLT analysis and notes the methodology adopted for estimating commercial insurance premiums is largely consistent with

[548] Aurizon Network, sub. 40: 179.
[549] See, Aurizon Network, sub. 10: 42.
[550] Aurizon Network, Response to QCA request for information #13 (risk and insurance), 17 February 2017.

the UT4 approach. However, Aurizon Network has included additional classes of insurance premiums, and the projected cost of some premiums has increased. Notwithstanding this, Aurizon Network's proposed insurance premiums for the UT5 pricing period are lower than those approved for the UT4 pricing period.

While the QCA considers the overall approach to estimating commercial insurance premiums is generally reasonable and supported by expert advice, we have concerns with some of the proposed allowances, as discussed below.

Civil liability and indemnity

Aurizon Network proposed a total allowance of $0.25 million for civil liability and professional indemnity insurance premiums, as estimated by JLT. Aurizon Network said that this insurance provides coverage in respect of claims for civil liability arising from the provision of professional services to third parties.[551]

In its report, JLT noted:

> Whilst Network asked JLT to include premium costings for this type of policy, in the complete insurance questionnaire, Network were unable to identify any professional services provided to third parties that were specifically attributable to CQCN. Revenue derived from Network's Professional Services was declared to be incidental at a figure of circa $500k.[552]

Willis Australia Limited (Willis) made a similar observation in its 2013 report providing advice on Aurizon Network's commercial insurance premiums allowance for the UT4 pricing period. Willis noted:

> Whilst our brief was to include premium costings for this type of insurance the completed insurance questionnaire provided no details of Professional Services being undertaken in relation to the CQCN and a nil annual income was therefore declared for such Professional Services. Therefore, the only premium costing we can provide is a minimum premium, which would be required by the Australian insurance market, should Professional Services be being undertaken of a similar nature to those declared under the annual Aurizon Holdings coverage.[553]

The QCA asked Aurizon Network to confirm whether it provides, or expects to commence providing, any professional services that would be considered insurable under such a policy. We also asked Aurizon Network to explain the extent to which these professional services are necessary for providing the declared service.

In its responses, Aurizon Network identified examples of activities that may be subject to such an insurance policy, including engineering studies, training, feasibility studies, project management work, design of third party rail infrastructure, rail infrastructure management, access management, protection services and rail grinding.[554] Aurizon Network said it provides such services from time to time.[555] Aurizon Network also cited feasibility studies related to an expansion as a further example, but said it was unaware if any of these will occur during the UT5 pricing period.[556]

In the draft decision, the QCA formed a preliminary view that Aurizon Network had not demonstrated that it had undertaken, or expects to undertake these activities, or that these

[551] Aurizon Network, Response to QCA request for information #12 (risk and insurance), 31 March 2017.
[552] Aurizon Network, sub. 11: 9.
[553] Willis 2013: 5.
[554] Aurizon Network, sub. 40: 176–177; Response to QCA request for information #12 (risk and insurance), 31 March 2017.
[555] Aurizon Network, Response to QCA request for information #12 (risk and insurance), 31 March 2017.
[556] Aurizon Network, Response to QCA request for information #12, 31 March 2017.

activities are specifically attributable to providing the declared service. On this basis, we proposed to exclude the projected premium for civil liability and professional indemnity from the forecast operating expenditure allowance.

Aurizon Network did not support this position. In its March 2018 submission, Aurizon Network said that, where it does provide such professional services to third parties, there will likely be a contractual obligation for Aurizon Network to hold professional indemnity insurance.[557] Aurizon Network added:

> Whilst an estimate of the fee income for such services might be incidental / immaterial, Aurizon Network does accept risk in providing such services for a breach of professional duty…[558]

The QCA again asked Aurizon Network to provide further specific examples of activities undertaken that justify the need for these insurance premiums. Aurizon Network identified the following examples of services it provided during the past 12 months:

- Provision of track protection officers for NBN construction, gas pipelines and council works, and train loadout maintenance in the corridor.
- Design works required to recommission branch lines connecting mines to the system.
- Feasibility studies relating to connecting infrastructure.[559]

The QCA considers that Aurizon Network has not identified how civil liability and professional indemnity insurance costs apply to the provision of regulated below-rail services, or that these costs are unable to be recovered via other cost recovery arrangements (for example, studies funding agreements or way leave cost recovery arrangements).

Based on the information made available to the QCA, Aurizon Network has not demonstrated that these costs are either additional or incremental, or that they should be directly recovered through access charges.

In the absence of sufficient justification, the QCA has formed the view that it would not be appropriate to include Aurizon Network's proposed civil liability and professional indemnity insurance premiums within the operating expenditure allowance.

Marine cargo insurance

Aurizon Network's proposed insurance allowance includes a total premium of $0.52 million for marine cargo insurance, as estimated by JLT. This premium was not included in the UT4 allowance for risk and insurance.

Aurizon Network said that marine cargo insurance provides coverage for property owned or leased by Aurizon Network whilst in transit. Aurizon Network cited an example as coverage provided for physical loss or damage to unregistered plant and equipment being moved around central Queensland by road transport.[560]

In estimating this premium, JLT noted:

[557] Aurizon Network, sub. 40: 176–177.
[558] Aurizon Network, sub. 40: 176–177.
[559] Aurizon Network, Response to QCA request for information #99, 30 April 2018.
[560] Aurizon Network, Response to QCA request for information #11 (risk and insurance), 17 February 2017.

> It is understood that it is extremely difficult to estimate the total value of goods that is transported in any one policy period and therefore the premium has been calculated on the estimated revenue of [redacted].[561]

In its draft decision, the QCA's preliminary view was to not accept the inclusion of a premium for marine cargo insurance on the basis that it was not sufficiently substantiated. We also expressed concerns regarding the basis for estimating the premium, which relied on revenue rather than the number and value of consignments transported.

In its March 2018 submission, Aurizon Network provided further information explaining the basis for including marine cargo insurance premiums, including the nature and frequency of its transportation activities. Aurizon Network also provided further advice from JLT supporting the proposed premium and the estimation method.[562] Based on this information, the QCA considers it reasonable to include Aurizon Network's proposed allowance for marine cargo insurance in the operating expenditure allowance.

Review events

Aurizon Network's proposal indicated its intent to use review event or 'cost pass-through' provisions of the 2017 DAU to recover costs associated with the following:

- major weather events where below-rail losses exceed $1 million
- catastrophic damage to the network from perils such as earthquake and other natural disasters where losses exceed $1 million
- liability losses which exceed $8 million.

Aurizon Network said that these arrangements are consistent with approved UT4 arrangements.

The QCA notes that, while the first two events could qualify as review events under cl. 5.3 of Schedule F of the 2017 DAU, there does not appear to be scope to recover liability losses in excess of $8 million, as Aurizon Network has proposed.

In response to the QCA's request to clarify its intent, Aurizon Network acknowledged that its 2017 DAU does not contain a provision to accommodate such a pass-through, nor has it proposed to introduce one. Aurizon Network said:

> The $8m threshold was originally derived as 1% of projected revenue (although this was established in the UT3 report). In the data supplied to Finity, there are no liability losses which exceed $8m, so this has not affected their estimates.
>
> Both the approved 2016AU and the 2017 DAU do not contain any provisions that allow for the cost past through of liability losses. Cost pass-throughs are only limited to those contained within Schedule F, Clause 5.3 of the 2017 DAU (which are the same as the 2016 AU).[563]

On this basis, the QCA has not given consideration to the proposed $8 million threshold for liability losses.[564]

The QRC expressed concern regarding the potential overlap between recovery of costs through self-insurance allowances and the review event mechanism. Anglo American shared this concern and said the access undertaking should include more prescriptive details regarding

[561] Aurizon Network, sub. 11: 13.
[562] Aurizon Network, Response to QCA request for information #102, 30 April 2018.
[563] Aurizon Network, Response to QCA request for information #7 (risk and insurance), 31 March 2017.
[564] The QCA's assessment of Aurizon Network's proposed review event provisions is set out in Chapter 9.

which assets and events are funded using self-insurance collected from users.[565] Anglo American added that the application of Aurizon Network insurance coverage (external, internal and self-insurance) is never clear.[566]

The QRC questioned the continued justification of significant self-insurance premiums, given that users pay for replacement of below-rail track infrastructure damaged by unforeseen events through the review event mechanism.[567] The QRC also noted Aurizon Network's proposed thresholds for review events and considered that the undertaking does not prevent Aurizon Network for seeking to recover costs below those amounts (that is, costs for which it is seeking self-insurance premiums) through the cost pass-through mechanism.[568] The QRC considered that either self-insurance premiums should be reduced or the cost pass-through mechanisms restricted such that they do not apply to events below the identified thresholds (for which the self-insurance premium has been provided).[569]

In its March 2017 submission, Aurizon Network said that the access undertaking is clear about self-insurance and cost pass-through mechanisms.[570] Aurizon Network said:

> The only mechanism to seek recover of additional costs is the review event mechanism contained within Schedule F of the Access Undertaking. There is a minimum threshold for cost, requiring incremental costs to exceed at least $1 million before a claim can be considered. There are also other triggers outlined in Schedule F, Clause 5.3 which prevent claims under the $1m threshold. If incremental costs are under $1m and meet the requirement of a Force Majeure Event, then it would be expected that these costs would be incurred by Aurizon Network as these are recovered through the self-insurance process and costs built into the Reference Tariffs.[571]

The QCA considers the distinction between self-insurance events and review event provisions is sufficiently clear. We also note that the 2016 Undertaking required additional reporting criteria to be included regarding insurance costs (now contained in cl. 3.7.2 of the 2016 Undertaking).[572] These provisions were included to improve transparency and address concerns of the type raised by Anglo American and the QRC.

QCA assessment

For the reasons set out above, the QCA does not consider it appropriate to approve Aurizon Network, proposed risk and insurance allowances. In summary, we consider it appropriate to make the following adjustments to Aurizon Network's proposed costs:

- reduction to reflect the removal of margins for profit and reinsurance from the proposed self-insurance allowance, which we consider are unsubstantiated
- reduction to commercial insurance costs to reflect the removal of the proposed premiums for civil liability and professional indemnity, which we consider are unsubstantiated

[565] Anglo American, sub. 18: 25.
[566] Anglo American, sub. 18: 23.
[567] QRC, sub. 21: 50.
[568] QRC, sub. 21: 50.
[569] QRC, sub. 21: 50.
[570] Aurizon Network, sub. 26: 8.
[571] Aurizon Network, sub. 26: 21.
[572] See, QCA 2016c, Volume I — Governance and access: 159.

- adjustment to projected self-insurance losses to reflect the application of updated exposure measures (gtks, egtks and turnover) to projected derailment, dewirement and liability losses, respectively
- adjustments to reflect the application of the QCA's forecasts of CPI inflation and MCI.

Applying these adjustments results in a total allowance for risk and insurance costs that is around 7 per cent lower than Aurizon Network's 2017 DAU proposal. The QCA's assessment is set out in Table 56.

The QCA's allowance for risk and insurance costs is around $1.5 million or 4 per cent higher than the draft decision, due to the inclusion of an allowance for marine cargo insurance premiums (increase of $0.5 million) and updated measures of exposure (increase of $1 million), including escalation.

Table 56 QCA assessment of risk and insurance allowances ($m)

Allowance	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total*
Commercial insurance costs					
Non-electric	2.58	2.64	2.70	2.77	10.69
Electric	0.44	0.45	0.46	0.47	1.81
Uninsured losses and retained risks (self-insurance)	5.19	5.50	5.68	5.83	22.19
Total risk and insurance costs	**8.21**	**8.59**	**8.84**	**9.06**	**34.70**

Totals may not add due to rounding.

7.8 Electricity transmission and connection costs

7.8.1 Aurizon Network's proposal

Aurizon Network proposed a total indicative allowance of $324 million over the UT5 pricing period for electricity transmission and connection costs. This expenditure reflects the forecast costs associated with transporting electricity from generators to overhead power infrastructure via connections with the Powerlink and Ergon Energy networks.[573]

Under Aurizon Network's 2017 DAU, transmission and connection costs are recovered through the AT_5 reference tariffs on the Blackwater and Goonyella Systems, consistent with treatment of these costs in the 2016 Undertaking. Aurizon Network's proposed transmission costs are set out in Table 57.

Aurizon Network noted that the forecast annual costs for each year of the UT5 pricing period are lower than the 2016–17 costs (the final year of the UT4 pricing period). Aurizon Network attributed this to an expectation that transmission charges will be lower as a result of Powerlink's proposed revenues for the 2018–22 regulatory control period. Aurizon Network also said that it has sought opportunities to optimise its transmission pricing arrangements, which are expected to result in cost savings during the UT5 pricing period.

These forecasts do not include the costs of purchasing electric energy supplied to electric traction trains, which are discussed in section 7.9.

[573] Aurizon Network, sub. 1: 241.

Table 57 Aurizon Network's proposed transmission and connection costs ($m)

System	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total*
Blackwater (including Rolleston)	40.34	41.27	42.12	42.99	166.73
Goonyella	38.35	39.04	39.75	40.47	157.60
Total	**78.69**	**80.31**	**81.87**	**83.45**	**324.32**

Source: Aurizon Network, Connection costs spreadsheet.

Totals may not add due to rounding.

Aurizon Network said that it is exploring options to reduce its transmission costs including through ongoing implementation of regenerative braking, and the use of alternating current (AC) locomotives on the Blackwater System to reduce the need for harmonic filters. Aurizon Network said that these initiatives could drive improvements in reliability and present opportunities to optimise connection points in the Blackwater System.[574]

Aurizon Network's transmission cost forecasts for the UT5 pricing period exclude transmission connection costs associated with three connection points (Dingo, Moranbah South and Rocklands), which Aurizon Network has confirmed have been decommissioned.[575]

Updated transmission costs

Since submitting its 2017 DAU, Aurizon Network has provided a number of updates to its projected transmission and connection costs for the UT5 pricing period. On 10 May 2017, Aurizon Network notified the QCA that electricity transmission prices for 2017–18 would change from those used in setting 2017–18 transitional reference tariffs. As a result of this change, Aurizon Network said that transmission costs in the approved transitional AT_5 tariff for 2017–18 would change by more than 2.5 per cent.[576]

Under the endorsed variation event provisions of the 2016 Undertaking[577], Aurizon Network is entitled to request that 2017–18 transitional reference tariffs be varied to reflect this change in electricity transmission costs. However, Aurizon Network requested that the QCA consider the revised transmission cost forecasts in making its UT5 draft decision, rather than adjusting transitional reference tariffs. Aurizon Network stated:

> Instead of seeking to amend its submitted FY2018 Transitional Reference Tariffs in respect of an Endorsed Variation Event, Aurizon Network requests that the QCA adjust the Transmission and Connection costs within the electric revenue build-up of its Draft Decision on UT5 to reflect the FY2018 Revised Pricing....[578]

Aurizon Network said that it had outlined its proposal with stakeholders who expressed no concerns with the revised 2017–18 transmission and connection charges being treated as part of the UT5 pricing process.[579]

[574] Aurizon Network, sub. 1: 242.
[575] Aurizon Network, sub. 40: 180.
[576] Aurizon Network 2017b.
[577] An endorsed variation event includes a change in electricity transmission prices that varies the electricity costs reflected in the AT_5 tariff by more than 2.5 per cent. Under clause 5.2(b) of Schedule F of the 2016 Undertaking, Aurizon Network is able to request a variation in reference tariffs within 60 days of being aware of an endorsed variation event.
[578] Aurizon Network 2017b.
[579] Aurizon Network 2017b.

In July 2017, Aurizon Network provided further revised transmission cost forecasts for each year of the UT5 pricing period. These costs were used to establish indicative reference tariffs for the purposes of the QCA's draft decision.

7.8.2 QCA analysis and assessment

Only the QRC commented on Aurizon Network's 2017 DAU proposed transmission costs, stating:

> QRC accepts these charges being passed through via the MAR at cost, subject to QCA scrutiny as to whether those costs, including decisions in relation to investment in new feeder stations, are efficient.[580]

The Australian Energy Regulator (AER) is responsible for the economic regulation of electricity network businesses, including Powerlink and Ergon Energy under national energy market legislation and rules.[581]

For most of Aurizon Network's connections to the transmission network, access and usage charges are directly regulated by the AER, because they are classified as prescribed transmission services. For these services, Aurizon Network pays regulated prices determined in accordance with the National Electricity Rules (NER) and the regulatory determinations of the AER. Setting of these prices is facilitated by AER approval of Powerlink's pricing methodology, and Ergon Energy's tariff structure statement and annual pricing proposals.[582]

The remaining transmission connections are for the sole use of Aurizon Network, and are classified as negotiated transmission services.[583] Charges for these services are determined by negotiation between the network provider and user, or through arbitration and dispute resolution by a commercial arbitrator. To facilitate these processes, the AER approves:

- a negotiating framework, which sets out procedures for negotiating the terms and conditions of access
- negotiated service criteria that each network service provider must apply when negotiating terms and conditions of access, including prices and access charges.

The AER is required to make a determination relating to the network providers' negotiating framework and negotiating service criteria, in accordance with the NER. The NER outlines the negotiated services principles and requirements for the negotiating framework. Under these requirements, the terms and conditions of access for a negotiated service should be fair and reasonable and any access charges should be based on the costs reasonably incurred by the network provider in providing network user access.

The AER has approved Powerlink and Ergon Energy's current negotiating framework, negotiated service criteria, pricing methodology (Powerlink), tariff structure statement and pricing proposal (Ergon Energy).

580 QRC, sub. 21: 50.
581 For further information on the AER's role and responsibilities, see: www.aer.gov.au.
582 Under derogations at clause 9.32.1(b) of the National Electricity Rules, Ergon Energy's network assets that may otherwise be considered prescribed 'transmission' services, are treated as distribution services for the purposes of economic regulation.
583 Around one-third of Aurizon Network's connections are negotiated services.

Feeder station investments

The QCA notes that two additional feeder stations (Wotonga and Memooloo) were commissioned during the UT4 pricing period. The QRC said that the QCA should scrutinise whether the decisions in relation to investment in new feeder stations were efficient.[584]

Aurizon Network identified the need for the Wotonga feeder station in its 2010 Coal Rail Infrastructure Master Plan (CRIMP). In 2011, the QCA approved the scope of the projects detailed in the 2010 CRIMP.[585] The Memooloo feeder station was commissioned as part of the electrification of the Bauhinia spur line between Rangal south and the Rolleston thermal coal mine. This feeder station is Aurizon Network's sole connection to the Ergon Energy distribution network.

The capital expenditure associated with both projects was approved by the QCA in its decision on Aurizon Network's 2015–16 capital expenditure claim.[586] The QCA's decision was informed by an engineering assessment of the prudency of scope, standard and cost of the projects, conducted by AECOM.[587]

QCA assessment

The transmission charges paid by Aurizon Network are determined in accordance with an established regulatory framework, and oversight by the AER. This provides some comfort that the charges are reasonable. Aurizon Network also has an incentive to negotiate more favourable transmission connection costs to deliver a lower AT_5 tariff to promote utilisation of its electric assets.

The QCA is also mindful that Schedule F of the 2017 DAU includes a revenue cap adjustment process to reconcile differences between allowed and actual transmission costs each year.[588] Subject to materiality, changes in transmission costs may also qualify as an endorsed variation event under cl. 5.2(b) of Schedule F of the 2017 DAU, allowing Aurizon Network to adjust reference tariffs accordingly at any time. These mechanisms provide for symmetric, *ex post* reconciliation of forecast and actual transmission costs which minimises risk of significant forecast error.

For these reasons, the QCA's draft decision expressed a preliminary view that Aurizon Network's revised transmission cost forecasts (as at July 2017) were generally reasonable. We indicated that the forecasts should be updated ahead of this decision to reflect its conclusion on forecast volumes. The QRC supported this position.[589]

Aurizon Network supported the QCA’s position and submitted revised transmission cost forecasts with its March 2018 submission. Aurizon Network noted that it had also revised its forecasts to reflect the forecast electric gross tonne kilometres (egtks) provided by Aurizon Network in its March 2018 submission.[590] The QCA requested further revised transmission cost forecasts in June 2018 following the release of updated pricing advice from Powerlink for the 2018–19 pricing year.

[584] QRC, sub. 21: 50.
[585] QCA 2011.
[586] QCA 2017c.
[587] AECOM 2017a: 17.
[588] Clause 4.3(c)(iii), Schedule F.
[589] QRC, sub. 53: 27.
[590] Aurizon Network, sub. 40: 180.

The QCA considers that Aurizon Network's June 2018 revised transmission costs for 2017–18 and 2018–19 are an appropriate basis for establishing indicative transmission and connection costs for the UT5 pricing period. As Aurizon Network's June 2018 updated forecasts extend to 2018–19 only, the QCA has escalated 2018–19 costs by its estimate of CPI inflation to derive forecasts for the remaining years of the UT5 pricing period. As the QCA's decision applies updated egtk volume forecasts that are not materially different from Aurizon Network's March 2018 volume forecasts, no further adjustments have been required in this regard.

For the purposes of establishing system allowable revenues and reference tariffs for this decision we have used the revised transmission costs as set out in Table 58 below.

Table 58 QCA assessment of indicative transmission and connection costs for the UT5 pricing period ($m)

System	*2017–18[a]*	*2018–19[a]*	*2019–20[b]*	*2020–21[b]*	*Total*
Blackwater (including Rolleston)	36.19	34.38	35.19	36.03	141.79
Goonyella	35.87	35.82	36.67	37.53	145.89
Total	**72.06**	**70.20**	**71.86**	**73.56**	**287.68**

a. Source: Aurizon Network, Response to operating expenditure RFI 103, 25 June 2018.

b. Based on escalation of 2018–19 proposed cost, escalated by QCA CPI inflation estimate of 2.37% annually.

Totals may not add due to rounding.

7.9 Electric traction energy costs

7.9.1 Aurizon Network's proposal

Aurizon Network supplies electricity to electric traction train operators through its overhead distribution network on the Goonyella and Blackwater Systems. Aurizon Network procures electricity through a supply agreement with an electricity retailer, and recovers the cost of providing this service through the electric energy charge (EC) component of reference tariffs.

The 2017 DAU provides a mechanism for the true-up of any over- or under-recovery of electric traction energy costs, as discussed in Chapter 9. In practice this mechanism means that these costs are passed through at cost, with any difference between forecast and actual costs reconciled through an *ex post* adjustment to the EC component .

In its November 2016 submission, Aurizon Network's proposed total costs for electric traction energy of $219 million over the UT5 pricing period, as set out in Table 59.

Table 59 Aurizon Network proposed electric traction energy costs ($m)

	2017–18	*2018–19*	*2019–20*	*2020–21*	*Total*
Electric traction energy costs	52.77	54.89	55.56	56.24	219.46

Source: Aurizon Network sub. 1: 243; Aurizon Network EC forecast model, December 2016.

Aurizon Network noted that its existing energy supply contract was due to expire and a new energy purchasing strategy, based on the concept of progressive purchasing, was being implemented from 1 July 2017. Progressive purchasing allows energy to be purchased periodically in 'blocks' at different prices, which are more reflective of movements in wholesale electricity market prices.

Aurizon Network submitted that it had consulted with users on its proposed approach, and had received support. The QRC endorsed the proposed approach.[591]

Aurizon Network submitted that the progressive purchasing strategy shares some similarities with a standard retail supply agreement; however, the retailer will apply a transparent margin to the wholesale cost of each block of electricity purchased. Aurizon Network said it expects the margin to be lower than that embedded in standard retail price contracts as there is no wholesale price risk borne by the retailer under a progressive purchasing arrangement.[592] Aurizon Network said that this approach provides an improved opportunity to monitor electricity price movements and opportunistically lock in the price for its electricity requirements in smaller blocks.[593]

Updated electric traction energy costs

During the course of the 2017 DAU investigation, Aurizon Network provided updates to its projected electric traction energy costs for the UT5 pricing period.

In June 2017, Aurizon Network completed its tender process for the progressive purchasing supply arrangement, and provided the QCA with further information regarding its energy purchasing strategy, and proposed energy costs for the UT5 pricing period. This information was supplied in the course of considering Aurizon Network's June 2017 DAAU.[594]

Aurizon Network subsequently provided further updated electric traction energy costs as part of its September 2017 DAAU.[595] The QCA used these forecasts to derive indicative EC reference tariff components for the purposes of its draft decision.

Aurizon Network supported the QCA's draft decision and provided a further updated forecast for electric traction energy costs in its March 2018 submission.

Aurizon Network said it had procured 64 per cent of its electrical energy requirements for the 2018–19 period and considered the revised forecast to be reasonably reflective of electricity costs. In revising its forecast, Aurizon Network escalated costs from 2019–21 using its proposed CPI inflation and derived indicative EC components using Aurizon Network's updated volume forecasts. Aurizon Network said it had taken this approach because insufficient energy had been procured to provide meaningful forecasts for 2019–21.[596]

In April 2018, Aurizon Network submitted an extension DAAU which included further revisions to electric traction energy costs, based on the latest forecasts for 2018–19 and incorporating a reconciliation of estimated cumulative over-recovery incurred in 2017–18.[597] This DAAU was approved by the QCA in May 2018.

7.9.2 QCA analysis and assessment

The QCA has considered Aurizon Network's progressive energy purchasing strategy and notes that a sound procurement process appears to have been undertaken. Moreover, this strategy was developed in close consultation with industry and was supported by the QRC.

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[591] QRC 2016.
[592] Aurizon Network, 'Proposed changes to the procurement of electricity from July 2017', unpublished information.
[593] Aurizon Network 2017c.
[594] QCA 2017b.
[595] Aurizon Network 2017e: 7.
[596] Aurizon Network, sub. 40: 182.
[597] Aurizon Network 2018a: 7.

Procuring energy through a traditional fixed-price retail contract typically provides reasonable price stability, insulating customers from potentially significant short-term price volatility in the wholesale electricity market. To offer this stability, retailers bear the short-term price risk on behalf of the customer, hedge that risk, and are compensated in the form of a margin. In contrast, progressive purchasing exposes Aurizon Network's electric traction customers to significant short-term price risk, which must be managed effectively. Nonetheless, the QCA is mindful that Aurizon Network has consulted with its users who have endorsed the proposed approach.

Aurizon Network also proposed a mechanism in Schedule F of the 2017 DAU to reconcile any difference between forecast and actual electric traction energy costs used to set the EC component of reference tariffs.[598] This recognises the volatility of wholesale electricity prices and the subsequent potential for material forecasting errors. We consider an *ex post* adjustment is appropriate, given the expectation that this will occur in the future.

For these reasons, and having regard to stakeholder submissions,[599] the QCA considers Aurizon Network's basis for estimating forecast electric traction energy costs is reasonable.

For the purposes of determining indicative EC reference tariff components for this decision, the QCA has adopted Aurizon Network's forecast electric traction energy costs as submitted with its April 2018 DAAU,[600] representing the most recent available cost estimates for 2018–19. In this instance, the QCA considers this a reasonable approach.

The 2018–19 projected cost has been escalated by the QCA's estimate of CPI inflation to derive indicative electric traction energy costs for the remainder of the UT5 pricing period. Indicative EC reference tariff components were then derived using the QCA's updated volume forecasts. The QCA's assessment of indicative electric energy costs, and EC reference tariff components for the UT5 pricing period, is set out in Table 60.

Table 60 QCA assessment of indicative electric traction energy costs and reference tariff components

	2017–18	***2018–19***	***2019–20***	***2020–21***	***Total***
Electric traction energy costs ($m)	69.51	63.58	65.09	66.63	264.82
QCA forecast egtk ('000's)	68,569,977	70,137,273	70,607,021	70,623,681	279,937,953
Indicative EC component ($/'000 egtk)	1.014	0.907	0.922	0.944	n/a

7.10 Cost escalation

The base-step-trend forecasting approach requires an estimate of the efficient rate of change in Aurizon Network's operating costs over the UT5 pricing period. This typically involves examining the underlying drivers of key input costs. In its most simple form, the rate of change might be a forecast measure of input price growth such as CPI inflation. More complex approaches can take account of different rates of change in specific input costs (labour, materials, fuel etc.), and may include adjustments for productivity growth.

598 See Chapter 9.

599 The QRC (sub. 53: 27) accepted the QCA's preliminary position on the treatment of electric traction energy costs.

600 Aurizon Network 2018a.

7.10.1 Aurizon Network's proposal

Aurizon Network applied two indices to escalate its adjusted base year system-wide and regional costs and corporate costs over the UT5 pricing period:

- forecast change in the CPI for non-labour operating costs
- forecast change in the WPI for labour costs.[601]

Aurizon Network's proposed cost escalators are illustrated in Table 61.

Table 61 Aurizon Network's proposed cost escalators

	2015–16	***2016–17***	***2017–18***	***2018–19***	***2019–20***	***2020–21***
WPI—Labour (%)	2.25	2.75	3.00	3.25	3.25	3.25
CPI— Non-labour (%)	1.49	2.50	1.22	1.22	1.22	1.22

Source: Aurizon Network, sub. 1: 205–206.

Aurizon Network used CPI inflation forecasts based on the method discussed in Chapter 4. Forecasts for WPI inflation were derived from Queensland Treasury and Trade's Mid-year Fiscal and Economic Review 2015–16.

7.10.2 QCA analysis and assessment

The base-step-trend forecasting approach requires an estimate of the efficient rate of change in Aurizon Network's operating costs over the UT5 pricing period. By this, we mean that if costs are efficient, the rate of their escalation should correspond with the net effect of the changes in the underlying determinants of those costs during the UT5 pricing period. This includes considering:

- likely changes in costs of providing the service (labour and non-labour cost escalation) and
- where there are other factors, such as changes in volume, how this will impact on efficient costs.

In the draft decision, the QCA considered Aurizon Network 2017 DAU proposed escalation rates and formed a preliminary view to accept the proposed measure of WPI for labour operating costs, updated for more recent forecasts. Aurizon Network accepted the use of the WPI forecasts proposed by the QCA.[602]

With regard to escalation of non-labour operating costs, the QCA's preliminary view was to adopt its estimate of CPI inflation. Aurizon Network did not accept the QCA's CPI inflation estimates and applied the revised forecasts proposed in its March 2018 submission, as discussed in Chapter 4.[603]

The QRC accepted the QCA's analysis and conclusions regarding cost escalation for operating costs.[604]

[601] Aurizon Network also applied forecast CPI inflation to escalate commercial insurance premiums, electric traction energy costs and some transmission charges. Self-insurance costs are escalated by the proposed MCI.
[602] Aurizon Network, sub. 40: 158.
[603] Aurizon Network, sub. 40: 158.
[604] QRC, sub. 53: 27.

Labour costs

Labour costs represent around two-thirds of Aurizon Network's system-wide and regional costs, and corporate overheads, based on the 2015–16 base year cost.

Unlike maintenance activities which require the employment of specific classes of specialised labour, the labour classes associated with Aurizon Network's operating costs are more varied in nature. Therefore the QCA considers that the Queensland Treasury and Trade WPI forecast is a reasonable estimate for the purpose of forecasting WPI over the UT5 pricing period.[605]

More recent WPI forecasts have been released since Aurizon Network prepared its 2017 DAU submission, which we have adopted for this decision.[606] The QCA's assessment of forecast escalation rates for labour operating costs is set out in Table 62.

Non-labour costs

Non-labour costs represent around one third of Aurizon Network's system-wide and regional costs, and corporate overheads in the base year.

We consider CPI inflation a reasonable escalator for non-labour operating costs. CPI inflation is a widely accepted proxy for the growth in general prices over time and has been frequently applied in previous regulatory determinations of the QCA and other regulators.

As discussed in Chapter 4, the QCA does not consider it appropriate to approve Aurizon Network's proposed inflation forecasts. In escalating the non-labour component of system-wide and regional costs, and corporate overhead costs, we have adopted our alternative forecast of 2.37 per cent per year over the UT5 pricing period (Table 62).

Ex post adjustment of escalation rates

Clause 4.3(c)(ii) of Schedule F in Aurizon Network's 2017 DAU provides for an annual *ex post* adjustment to the operating costs component of allowable revenue to account for the difference between the:

- forecast CPI inflation used for the purposes of determining reference tariffs in the relevant year, and
- actual CPI inflation for the relevant year.

In addition, cl. 4.4(a)(ii) outlines a requirement for allowable revenue in subsequent years to be adjusted to reflect the actual change in the MCI and CPI as used in the calculation of the approved revenue adjustment amount.

The QCA notes these mechanisms applying to operating costs (excluding maintenance costs) do not recognise that the labour components of Aurizon Network's operating expenditure forecast are escalated by forecast WPI rather than forecast CPI inflation. In practice, this means costs that are forecast using WPI escalation are 'trued-up' in the revenue cap adjustment process

[605] The QRC (sub. 21: 47) questioned whether it was appropriate to escalate costs based on WPI, when Aurizon Network notes it has made labour cost savings. However, the QCA notes that labour cost savings are incorporated into Aurizon Network's base year costs before application of WPI cost escalation, which the QCA considers a reasonable approach.

[606] The Queensland Government released its 2018–19 State Budget in June 2018, however the relevant WPI projections are unchanged from those indicated in the 2017–18 budget.

using the difference between forecast WPI and actual CPI. The QCA considers this a conceptual anomaly that ought to be corrected.[607]

On this basis, the QCA's draft decision expressed a preliminary view that the annual revenue cap adjustment process should be amended to include adjustments for the difference between the Queensland Treasury and Trade forecast of WPI and the actual ABS WPI index value (Queensland WPI, private sector, all industries).[608] The QCA provided drafting for the amendment of Schedule F, cl. 4.3(c)(ii) and cl. 4.4(a)(ii) of Aurizon Network's 2017 DAU to reflect this change. The QRC supported this proposed approach.[609]

Aurizon Network accepted the use of the Queensland WPI (private sector, all industries) in forecasting labour cost escalation for operating costs, and agreed with the concept of an *ex post* reconciliation. However, it proposed that the adjustment for actual labour price inflation be based on a weighted composite index, using actual outcomes in the following ABS WPI series:

- National Mining (A2705060V) weighted at 80 per cent, and
- Queensland, all industries (A2704548F) weighted at 20 per cent.

Aurizon Network said that these weightings were based on the geographical location of its labour resources that are funded by the operational costs allowance, being 20 per cent Brisbane based (FTE of 235) and 80 per cent based elsewhere (FTE of 951).[610] Aurizon Network said that it had considered applying labour sub-indices consistent with those used in the MCI, however it noted that:

> due to the nature of the labour costs within the operational costs allowance being predominately office based and engineering staff, we considered that the exclusion of the national construction index was appropriate.[611]

The QCA sought further justification from Aurizon Network to support its proposed approach. In response, Aurizon Network submitted that the Queensland WPI currently undercompensates Aurizon Network for labour cost inflation outside of Brisbane. It submitted that 80 per cent of its workforce is located within Central Queensland, and argued that wages in these regions move in line with movements of mining wages.[612] Aurizon Network noted the absence of a Queensland-specific mining sector WPI index and considered the national mining index was the next best alternative.[613]

The QCA has not adopted Aurizon Network’s suggested sub-indices for the *ex post* WPI reconciliation, for the following reasons:

- Aurizon Network’s suggested approach assumes that it is in competition with the mining industry for its entire labour requirement outside of Brisbane. The QCA considers this is not a reasonable assumption. We note that Aurizon Network’s MCI applying to costs for maintenance labour resources (which are almost entirely based outside of Brisbane) attributes only a 33 per cent weighting to the mining WPI sub-index.

[607] In UT3, Aurizon Network escalated all operating costs by CPI only. In UT4, a separate labour cost escalation was introduced; however, cl. 4.3(c)(ii) and 4.4(a)(ii) were not revised to reflect this.
[608] This index reflects the varied nature of labour classes associated with Aurizon Network's operating costs.
[609] QRC, sub. 53: 33.
[610] Aurizon Network, sub. 40: 261.
[611] Aurizon Network, sub. 40: 261.
[612] Aurizon Network, Response to operating expenditure RFI 104, 30 April 2018.
[613] Aurizon Network, Response to operating expenditure RFI 104, 30 April 2018.

- The FTE numbers used by Aurizon Network to derive the suggested sub-index weightings appear to reflect total FTEs of the network business, not only those funded through the operating cost allowance, as suggested by Aurizon Network.[614] As such, we understand that maintenance FTE's are also included in the calculation, which would overstate the weighting applied to non-Brisbane located FTEs.

The QCA notes that the WPI (Queensland, private sector, all industries) is a broad measure of wage price inflation that implicitly captures changes in wages in the mining industry, construction, and a range of other labour types that are relevant to an organisation such as Aurizon Network. In the QCA's view, a true-up that references outcomes in actual WPI (Queensland, private sector, all industries) appropriately adjusts Aurizon Network's operating cost allowances for labour price growth.

The QCA's decision is to amend the annual revenue cap adjustment process to include an *ex post* adjustment to forecast operating costs to reflect the difference between the Queensland Treasury and Trade forecast of WPI and the ABS estimate (Queensland WPI, private sector, all industries). The QCA has included drafting amendments in Schedule F, cl. 4.3(c)(ii) and cl. 4.4(a)(ii) of Aurizon Network's 2017 DAU to reflect this change (see Appendix H). In the interests of clarity, the QCA has also expanded the Part 12 definition of CPI to include additional descriptive detail regarding the relevant ABS data series to be used in the *ex post* reconciliation exercise.

The QCA considers this approach delivers a more conceptually sound outcome that balances the interests of all parties by permitting a more efficient recovery of costs.

Volume forecasts

Coal volumes have a direct impact on forecast costs associated with electric traction energy, electricity transmission and self-insurance. The QCA has considered the impact of updated volume forecasts on these costs, where relevant.

The QCA is of the view that the volume forecasts applied in this decision are unlikely to result in an incremental change in train paths during the UT5 pricing period of a sufficient magnitude to justify an adjustment to other operating costs. As such, we have not recommended any change to Aurizon Network's forecast system-wide and regional operating expenditures, or corporate overheads, as a consequence of changes in volumes.

Anglo American said that Aurizon Network's claimed expenditures are forecast to increase despite the proposed volume forecast remaining flat for the UT5 pricing period.[615] Based on the QCA's review of Aurizon Network's proposed step changes in operating expenditures, these increases are the result of factors other than coal volumes.

QCA assessment

Table 62 sets out the real cost escalation rates that the QCA considers appropriate to apply to Aurizon Network's operating expenditure for the UT5 pricing period.

[614] Aurizon Network's revised corporate overhead model (March 2018) indicates a total Network FTE count (post-corporate restructure) of 1184.

[615] Anglo American, sub. 18: 7.

Table 62 QCA assessment of cost escalators for operating costs

Escalator	*2016–17*	*2017–18*	*2018–19*	*2019–20*	*2020–21*
WPI—Labour (%)	1.70[a]	2.25[c]	2.5[c]	3.0[c]	3.0[c]
CPI–Non-labour (%)	1.80[b]	2.37	2.37	2.37	2.37

Sources: a. ABS 2018a; b. ABS 2018b; c. Queensland Government 2017: 5.

The QCA also considers it appropriate to amend the annual revenue cap adjustment process to include adjustments for the difference between the Queensland Treasury and Trade forecast of WPI and the ABS estimate of Queensland WPI, private sector, all industries. This will ensure that costs attracting WPI escalation during forecasting are subject to an *ex post* reconciliation based on the actual change in WPI, rather than CPI.

The QCA has provided drafting for the amendment of Schedule F, cl. 4.3(c)(ii) and cl. 4.4(a)(ii) of Aurizon Network's 2017 DAU to reflect this change, as set out in Chapter 9. In the interests of clarity, the QCA has also expanded the Part 12 definition of CPI to include additional descriptive detail regarding the relevant ABS data source to be used in the *ex post* reconciliation exercise.

7.11 General allocations for non-coal traffic

The QCA considers it reasonable that Aurizon Network recovers the majority of its operating costs through reference tariffs and allowable revenues for coal-carrying train services. Nonetheless, we consider that an efficient allocation of costs would recognise the contribution that non-coal carrying train services make to the costs of operating the CQCN. Access charges for non-coal train services are within the scope of the access undertaking as they use the declared service.

As discussed in section 7.5.3, Aurizon Network has made deductions to its proposed Network Train Operations costs to reflect an allocation to non-coal traffic. Aurizon Network also proposed deductions to direct costs for a number of functional areas in recognition of 'non-regulated' activities, or activities that do not relate to the provision of below-rail services. As noted in section 7.5.3, Aurizon Network has characterised its allocations in various ways and used terminology that makes the intent of some allocations unclear.

The QCA sought clarification from Aurizon Network regarding how it had explicitly accounted for non-coal costs in its allocation approach. Notwithstanding Aurizon Network's statement that costs related to non-regulated activities such as non-coal train services are excluded from the operating expenditure proposal[616] the QCA has not been able to adequately verify how non-coal allocations for other cost categories have been estimated by Aurizon Network. In the QCA's view, it is not clear how any of the allocated costs expressly recognise an allocation for activities that relate to non-coal traffic, with the exception of Network Train Operations costs.

On balance the QCA considers that the allocations proposed, while they may in some cases recognise costs associated with providing access to the declared service for non-coal carrying trains, are likely to understate those non-coal costs when taken as an overall portion of operating costs. We also note that Aurizon Network has not applied any explicit non-coal allocations in its proposed insurance and self-insurance costs, or allocated corporate overheads. This is likely to result in reference tariffs for coal-carrying trains recovering the costs of providing access that should be attributed to non-coal carrying traffic. In the QCA's view, such

[616] Aurizon Network, sub. 1: 204.

an outcome does not appropriately balance the legitimate business interests of Aurizon Network, with the interests of access holders and access seekers in accordance with s. 138(2) (c), (d), (e) and (h) of the Act.

The QCA acknowledges that the CQCN is predominantly built for, and used by, coal-carrying traffic. Within this in mind, any allocation of costs to non-coal traffic should have regard to the materiality of the cost impact that non-coal traffic has on the costs of operating the network. In considering this issue, the QCA reviewed Aurizon Network's reported revenues from coal and non-coal traffic access charges since 2013–14, as published in its below-rail financial statements. As illustrated in Table 63, revenue from non-coal access charges has ranged from around $10 million to $12 million per year between 2013–14 and 2016–17. On average, this represents around 1.15 per cent of Aurizon Network's total revenue from access charges during this period. The QCA considers this is not an immaterial source of revenue for Aurizon Network. This also suggests that the costs of providing access to non-coal traffic are not immaterial.

The QCA notes that the Australian Energy Regulator (AER) has considered similar issues in the context of electricity distribution and transmission networks, where shared assets are used to provide both regulated and unregulated services. To recognise this, the AER applies a reduction to regulated revenues where unregulated revenues earned from shared assets exceed 1 per cent of the total annual regulated revenue requirement for a regulatory year.[617]

Having regard to the criteria at s. 138(2) of the Act and considering stakeholder submissions, the QCA considers it appropriate to apply a general, but conservative, non-coal allocation of aggregate operating expenditure to recognise some of the costs associated with providing access to the declared service for non-coal traffic. The QCA has derived an estimated non-coal allocation based on the proportion of non-coal access charge revenue, to total access charge revenue, using historical actual reported revenues (Table 63). In the absence of an alternative, the QCA considers the four-year average proportion of non-coal access charge revenue to total access charge revenue of 1.15 per cent is a reasonable basis for a general non-coal allocation of operating expenditure for the UT5 pricing period.

Table 63 Aurizon Network revenues from coal and non-coal access charges ($m)

	2013–14	***2014–15***	***2015–16***	***2016–17***	***Average***
Access charge revenue - Coal	815.96	918.22	1,010.51	1,083.55	957.06
Access charge revenue - Other (non-coal)	11.74	12.38	9.97	10.35	11.11
Other revenue	1.42	2.78	0.43	7.42	3.02
Total below-rail revenue (excl. electric traction energy charges)	829.13	933.38	1,020.91	1,101.32	971.18
Non-coal access charge revenue as a proportion of total access charge revenue (excl. 'other' revenue)	1.42%	1.33%	0.98%	0.95%	1.15%

Source: Aurizon Network 2017i; Aurizon Network 2017j; QCA analysis.

In deriving the base operating expenditure to which the non-coal allocation should apply, the QCA has excluded Network Train Operations costs, in acknowledgement of the discrete non-

617 AER 2013a: 8.

coal allocation applying to these costs (section 7.5.3). In this instance, the QCA is also willing to accept that Infrastructure Management costs, and those categories of Business Management costs that are allocated at less than 100 per cent, may also imply some non-coal allocation of costs. As such, we have adopted a conservative approach and have not applied the general non-coal allocation to these costs, or their associated step changes (section 7.5.3).

Transmission and connection costs, and electric traction energy costs, are also excluded as these are essentially passed through to users at cost.

Applying this approach results in a total non-coal allocation of total operating expenditure of $3.52 million over the UT5 pricing period, as derived in Table 64.

Table 64 QCA assessment of non-coal allocations – Operating expenditure ($m)

	2017–18	***2018–19***	***2019–20***	***2020–21***	***Total***
Total operating expenditure allowance (excl. electric traction energy costs)	190.73	192.17	205.96	210.10	798.95
Less: Excluded system-wide and regional costs (and associated step changes)	(48.17)	(49.68)	(52.65)	(53.78)	(204.28)
Less: Transmission and Connection costs	(72.06)	(70.20)	(71.86)	(73.56)	(287.68)
Sub Total	70.50	72.29	81.45	82.75	307.00
Non-coal allocation (at 1.15%)	**0.81**	**0.83**	**0.93**	**0.95**	**3.52**

Totals may not add due to rounding.

As a test of reasonableness, the QCA notes that the total allocation of costs to non-coal services (including that applied to maintenance costs – Chapter 8) is conservative when compared with average historical actual revenues from access charges for non-coal traffic. In total, the QCA's overall discrete non-coal allocations represent around 20 per cent of estimated average annual revenues from non-coal access charges, as illustrated in Table 65.

In aggregate, the allocations of system-wide and regional costs approved in the QCA's decision, combined with the discrete non-coal allocations for operating and maintenance costs, imply an overall allocation of around $19 million to activities that do not relate to the provision of access for coal-carrying trains services for the UT5 pricing period, or around 32 per cent of estimated average total revenue from non-regulated below-rail services and non-coal access charges.

Taking this approach allows Aurizon Network to recover at least the efficient costs of providing access to coal-carrying train services through system allowable revenues. The QCA considers this achieves an appropriate balance between the legitimate business interests of Aurizon Network and the interests of access seekers and users of the declared service.

Table 65 Non-coal allocations as a proportion of estimated average non-coal and non-regulated below-rail revenues ($m)

	2017–18	*2018–19*	*2019–20*	*2020–21*	*Total*
QCA decision - Total system-wide and regional opex (before allocation)	67.61	69.60	73.92	74.90	286.04
QCA decision - Total system-wide and regional opex (after allocation)	65.31	67.23	71.40	72.32	276.26
Estimated 'non-regulated' allocation implied in QCA decision allowance category allocations	2.30	2.37	2.53	2.58	9.78
Non-coal allocation - Operating expenditure	0.81	0.83	0.93	0.95	3.52
Non-coal allocation - Maintenance expenditure	1.39	1.45	1.49	1.53	5.85
Total 'non-regulated' (including non-coal) allocations implied in QCA decision	**4.50**	**4.65**	**4.95**	**5.06**	**19.15**
Average estimated access charge revenue from non-coal traffic [a]	11.37	11.64	11.92	12.20	47.13
Average estimated revenue from 'Other' (non-regulated) below-rail services [a]	3.09	3.16	3.23	3.31	12.79
TOTAL average estimated revenue from non-regulated below-rail services	**14.46**	**14.80**	**15.15**	**15.51**	**59.92**

a. Historical average of 2013–14 to 2016–17, escalated by CPI inflation of 2.37% annually.

The QCA considers it is appropriate to apply this general non-coal operating cost allocation, having regard to the factors at s. 138(2) of the QCA Act. Specifically, applying this allocation strikes a reasonable balance between the legitimate business interests of Aurizon Network and the interests of access seekers and users (s. 138(2) (b), (e) and (h)), while allowing Aurizon Network to charge a price for access that should be able to generate expected revenue that is at least sufficient to meet the efficient costs of providing access to the declared service, consistent with s. 168(A)(a).

Importantly, the QCA considers this approach to recognising non-coal costs to be an interim measure. In future, we suggest the matter of non-coal allocations ought to be considered more broadly, potentially at the total allowable revenue level, as discussed in section 7.5.3.

7.12 QCA assessment of total operating expenditure

The QCA has assessed each element of Aurizon Network's proposed operating expenditure allowance for the UT5 pricing period and has developed an alternative estimate that it considers appropriate, as set out in Table 66.

Table 66 QCA assessment of Aurizon Network's proposed UT5 operating expenditure ($m)QCA assessment of Aurizon Network's proposed UT5 operating expenditure ($m)

Category	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total*
System-wide and regional costs	65.31	67.23	71.40	72.32	276.26
Corporate overheads [a]	45.15	46.15	53.87	55.15	200.32
Risk and insurance	8.21	8.59	8.84	9.06	34.70
Transmission and connection	72.06	70.20	71.86	73.56	287.68
Less: General non-coal allocation	(0.81)	(0.83)	(0.93)	(0.95)	(3.52)
Total	**189.92**	**191.34**	**205.02**	**209.15**	**795.43**

Totals may not add due to rounding.

a. Includes opex-funded restructure overhead allowance (section 7.6.3.)

The QCA's estimate of an appropriate total operating cost allowance is derived by making the following net adjustments to Aurizon Network's 2017 DAU proposed operating costs, inclusive of adjustments for cost escalation:

- $13.6 million reduction to system-wide and regional costs
- $3.5 million reduction to corporate overheads
- $2.6 million reduction to risk and insurance allowances
- $36.7 million reduction to proposed transmission and connection charges.
- $3.5 million reduction to recognise allocation of operating costs to non-coal services.

The QCA considers it appropriate to make these adjustments having regard to the matters set out in s. 138(2) of the QCA Act for the reasons contained in our analysis above.

Applying the QCA's adjustments results in a total operating cost allowance (excluding electric traction energy costs) of $795 million for the UT5 pricing period, compared with Aurizon Network's proposal of $855 million. In aggregate, the QCA considers this is a material difference and therefore considers that Aurizon Network's proposed allowance is not appropriate to approve, having regard to s. 138(2) of the QCA Act.

Specifically, the QCA considers Aurizon Network's proposed operating expenditure allowance is higher than reasonably required to provide below-rail services to coal-carrying trains during the UT5 pricing period. In the QCA's view, this outcome does not appropriately balance Aurizon Network's legitimate business interests, the public interest, and the interests of access seekers and users. In addition, such an outcome would not advance the object of Part 5 of the QCA Act to promote the economically efficient operation, use of and investment in, infrastructure by which the declared service is provided.

The QCA considers its decision on an appropriate operating cost allowance, when taken as a component of overall revenues provided by this decision, allows Aurizon Network to recover revenues at least enough to meet the efficient costs of providing access to the declared service, while providing incentives for Aurizon Network to reduce costs or otherwise improve productivity across the period, consistent with s. 168A of the QCA Act. The QCA considers this appropriately balances Aurizon Network's legitimate business interests, the public interest, and the interests of access seekers and access holders, in accordance with s. 138(2) of the QCA Act.

8 MAINTENANCE COST ALLOWANCE

8.1 Aurizon Network's 2017 DAU proposal

Aurizon Network's 2017 DAU proposed reference tariffs and allowable revenues based on a maintenance allowance for the UT5 pricing period of $920.6 million (by category in Table 67). The allowance comprises direct costs—those related to maintenance activities performed on the CQCN—and indirect costs—including the return Aurizon Network recovers on its investments in maintenance assets (for example, ballast undercutting machinery) and a return on inventory held for maintenance purposes.

Table 67 Aurizon Network's UT5 forecast total maintenance costs, in nominal dollars ($m)

Aurizon Network UT5 maintenance proposal	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total*
Ballast Undercutting Renewals[1]	64.5	65.7	70.8	72.1	273.0
Resurfacing	24.5	25.5	26.4	27.0	103.4
Rail Grinding	18.8	19.1	19.3	19.6	76.8
Rail Renewal	–	–	–	–	–
General Maintenance	54.3	55.2	56.1	57.1	222.7
Signalling	25.8	26.3	26.8	27.3	106.1
Traction Power	10.2	10.3	10.4	10.5	41.4
Telecommunications	5.0	5.1	5.2	5.3	20.6
Structures	4.5	3.9	4.0	4.2	16.6
Maintenance Planning and Support	4.6	4.7	4.8	4.9	19.0
Total direct costs	**212.2**	**215.7**	**223.8**	**227.9**	**879.6**
Return on Assets	6.8	6.5	9.6	9.0	31.8
Return on Inventory	1.7	1.6	1.5	1.5	6.2
GPR Costs	–	1.5	–	1.5	3.0
Total maintenance allowance	**220.7**	**225.2**	**234.9**	**239.8**	**920.6**

Note: (1) This cost category is referred to as Ballast Undercutting throughout Aurizon Network's 2017 DAU proposal.

8.2 Key issues identified during the QCA's investigation

The QCA has considered all elements of Aurizon Network's 2017 DAU proposal in making our decision on the UT5 pricing period maintenance allowance. The following issues attracted comment from stakeholders, or were identified for further consideration:

- the appropriateness of Aurizon Network's direct cost forecasting approach for individual categories, including the appropriate treatment of ballast undercutting renewal costs—within Aurizon Network's maintenance allowance or capital indicator (section 8.5)
- a prudent approach for transitioning from actual to efficient costs (section 8.6)
- determining an appropriate allocation of maintenance costs for non-coal services (section 8.7)

- the appropriateness of Aurizon Network's indirect costs and related matters, including depreciation, return on maintenance plant assets and return on inventory (section 8.8)
- the appropriateness of Aurizon Network's Maintenance Cost Index (MCI) forecast (section 8.9).

8.3 QCA decision

Summary of decision 8.1

- **The QCA considers the appropriate way for Aurizon Network to amend its draft access undertaking is to revise its proposed allowable revenues and reference tariffs based on the maintenance allowance set out in Table 69 and** Table 70**.**
- **The QCA considers the appropriate way for Aurizon Network to amend its draft access undertaking is to revise its proposed capital indicator to reflect the transitional reclassification of ballast undercutting renewal costs which are to be capitalised in 2019–20 and 2020–21. This is set out in Table 71**.

The QCA has assessed each element of Aurizon Network's proposed maintenance allowance and considers it not appropriate to approve, having regard to the factors at s. 138(2) of the QCA Act.

Aurizon Network's 2017 DAU proposed maintenance allowance of $920.6 million is higher than that appropriate to provide below-rail services to coal-carrying trains during the UT5 pricing period. The QCA considers that this does not appropriately balance Aurizon Network's legitimate business interests, the public interest, and the interests of access seekers and access holders. Aurizon Network's proposed maintenance allowance would not promote the economically efficient operation, use of and investment in infrastructure underpinning the declared service.

The QCA's decision provides a maintenance allowance of $739 million, with a corresponding increase in the capital indicator of $159.1 million (nominal, end of year dollars). This provides an approved total of $898.1 million for the UT5 pricing period, which is around $23 million less than Aurizon Network's 2017 DAU proposal of $920.6 million. Ballast undercutting renewal costs, representing 33 per cent of Aurizon Network's direct maintenance cost claim, will be transitioned to capital expenditure during the UT5 pricing period.

The QCA's decision generally reflects Aurizon Network's March 2018 submission for direct costs.

Table 68 Comparison between QCA's decision and Aurizon Network's direct maintenance forecasts

Direct Cost Category	*Aurizon Network's 2017 DAU proposal - QCA position*	*Aurizon Network's March 2018 submission - QCA position*
Grinding — mainline	🟢	🟢
Grinding — turnouts	🟢	🟢
Traction Power	🟢	🟢
Maintenance planning & support	🟢	🟢
Structures	🟢	🟢
General track	🟢	🟢
Resurfacing — mainline	🔴	🟢

Resurfacing — turnouts		
Signalling		
Telecommunications		
Ballast undercutting renewals — mainline		
Ballast undercutting renewals — turnouts		

Overall, the QCA's decision is to:

- approve Aurizon Network's direct costs as outlined in its March 2018 submission,[618] in relation to:
  - rail grinding costs (section 8.5.5) and traction power costs (section 8.5.6) as also outlined in its 2017 DAU proposal
  - resurfacing costs, derived from Aurizon Network's 'bottom-up' cost model (section 8.5.4)
  - non-mechanised maintenance costs derived from a 2016–17 forecasting base year, excluding traction power (section 8.5.6)
- approve Aurizon Network's ballast undercutting renewal costs as outlined in its March 2018 submission (section 8.5.2); however, unlike Aurizon Network's March 2018 submission, our decision requires the transitional reclassification of ballast undercutting renewal costs from the maintenance allowance to capital expenditure in 2019–20 and 2020–21 (section 8.5.3)
- require changes to Aurizon Network's direct costs as outlined in its March 2018 submission, to approve one Ground Penetrating Radar (GPR) run in 2019–20, which has been included in the capital indicator consistent the treatment of ballast undercutting renewal costs (section 8.5.2)
- for other aspects of Aurizon Network's 2017 DAU maintenance proposal:
  - allocate a portion of maintenance costs to non-coal services (section 8.7)
  - remove CPI escalation of depreciation charges and derive depreciation costs for non-mechanised maintenance activities from Aurizon Network's fixed asset register (section 8.8.1), although the QCA has not undertaken any optimisation of these assets (section 8.8.2)
  - apply the QCA's post-tax nominal WACC to the written-down value of Aurizon Network's fixed asset register (section 8.8.3)
  - use Aurizon Network's 2016–17 estimate of average inventory assets required for maintenance activities to determine inventory holdings for the UT5 pricing period and apply the QCA's approved post-tax nominal WACC to calculate the return on inventory (section 8.8.4)
  - use the annual MCI forecasts submitted in Aurizon Network's 2017 DAU proposal (updated for actual 2016–17 sub-indices), but not the methodology used to reach its proposed MCI (section 8.9)

[618] This includes material provided to the QCA in support of the March 2018 submission.

In summary, the key difference to Aurizon Network's March 2018 submission is the transitional reclassification of ballast undercutting renewal costs. Our decision requires ballast undercutting renewal costs consistent with the costs provided in Aurizon Network's March 2018 submission to be shifted from the maintenance allowance to the capital indicator in 2019–20 and 2020–21 (section 8.5.3).

The QCA's decision appropriately balances Aurizon Network's legitimate business interests and the interests of access holders and access seekers. In addition, this decision advances the object of Part 5 of the QCA Act and the pricing principles at s. 168A(a) and (d) of the QCA Act, by providing incentives for Aurizon Network to reduce costs or otherwise improve productivity, while generating expected revenue at least enough to meet the efficient costs of providing access to the service. We consider it appropriate to make this decision having regard to the matters set out in s. 138(2) of the QCA Act and for the reasons contained in our analysis.

The QCA's decision differs from its preliminary views expressed in the draft decision. Specifically, this decision considers Aurizon Network's March 2018 submission providing new information and analysis to inform:

- revised allowances for ballast undercutting renewals, resurfacing, structures and general track costs
- a transitional reclassification of ballast undercutting renewal costs from the maintenance allowance to capital expenditure
- removal of an efficiency factor adjustment over the UT5 pricing period
- an allocation of maintenance costs to non-coal train services, although this was foreshadowed in the draft decision
- revised depreciation estimates
- updated post-tax nominal WACC applied for return on assets and inventory, and updated inventory holdings split between maintenance and other activities to determine the return on inventory
- updated MCI weightings for the *ex post* reconciliation of forecast MCI to actual MCI.

Table 69 sets out the QCA's decision on the UT5 maintenance allowance for each category of maintenance expenditure; Table 70 sets out our allowances after allocation to each coal system and between electric and non-electric expenditure; and Table 71 sets out the QCA's approved transitional reclassification of capitalised ballast undercutting renewal forecast costs.

Table 69 QCA's UT5 maintenance allowance with approved allocations, by category ($m)

	2017–18	*2018–19*	*2019–20*	*2020–21*	*Total*
1. Forecast direct costs					
Ballast undercutting renewals—mainline [1]	62.0	62.4	68.9	69.9	263.3
Ballast undercutting renewals—turnouts	4.5	4.4	4.5	4.6	18.0
Maintenance planning & support	5.0	5.1	5.2	5.3	20.7
General track	52.4	55.3	57.0	58.5	223.2
Grinding—mainline	14.8	15.0	15.2	15.4	60.3
Grinding—turnout	4.0	4.1	4.1	4.2	16.5
Resurfacing—mainline	15.1	16.7	16.7	17.4	66.0
Resurfacing—turnouts	3.9	4.2	4.7	4.4	17.2
Signalling	22.4	22.8	23.3	23.8	92.3
Structures	6.3	6.4	6.5	6.6	25.8
Telecommunications	4.8	4.9	5.0	5.1	19.7
Traction power	10.2	10.3	10.5	10.6	41.5
Total	**205.3**	**211.6**	**221.7**	**225.9**	**864.5**
2. Forecast indirect costs					
Return on assets	8.1	8.6	9.9	9.3	35.9
Return on inventory	1.0	0.9	0.9	0.9	3.6
Total	9.1	9.5	10.8	10.2	39.5
Total forecasts	**214.3**	**221.1**	**232.5**	**236.0**	**904.0**
3. Efficiency factor					
Efficiency factor to maintenance allowance (zero)	n/a	n/a	n/a	n/a	n/a
4. Allocations of forecast costs					
Non-coal	(1.4)	(1.4)	(1.5)	(1.5)	(5.9)
Capital indicator: Allocation for capitalised ballast undercutting renewal costs	-	-	(79.3)	(79.8)	(159.1)
QCA decision maintenance allowance	**213.0**	**219.7**	**151.7**	**154.7**	**739.0**

Notes: (1) Ballast undercutting renewals–mainline –includes GPR costs of $1.3 million in 2019–20; capital indicator costs presented in nominal end of year $ for comparison purposes only; figures may not add due to rounding.

Table 70 QCA's UT5 maintenance allowance, by electric and non-electric ($m)

	2017–18	*2018–19*	*2019–20*	*2020–21*	*Total*
1. Non-electric					
Blackwater	88.0	91.6	58.6	60.0	298.1
GAPE	14.5	13.2	11.4	11.6	50.7
Goonyella	84.8	87.7	56.4	57.3	286.2
Moura	11.3	13.0	11.6	11.9	47.8
Newlands	4.1	3.7	3.2	3.2	14.2
Total—non electric	202.7	209.2	141.2	143.9	697.0
2. Electric					
Blackwater	4.6	4.7	4.8	4.8	19.0
Goonyella	5.6	5.7	5.8	5.9	23.0
Total—electric	10.3	10.4	10.6	10.7	42.0
Total	**213.0**	**219.7**	**151.7**	**154.7**	**739.0**

Note: Figures may not add due to rounding.

Table 71 QCA's approved forecast capitalised ballast undercutting renewal costs UT5 ($m)

System	*2017–18*	*2018–19*	*2019–20*	*2020–21*	*Total*
Blackwater	-	-	39.6	39.3	78.9
GAPE	-	-	2.1	2.4	4.5
Goonyella	-	-	34.2	34.6	68.9
Moura	-	-	2.8	2.8	5.6
Newlands	-	-	0.6	0.7	1.3
Total—capitalised	-	-	**79.3**	**79.8**	**159.1**

Note: Values presented in nominal end of year $ for comparison purposes only; figures may not add due to rounding.

8.4 Overview of Aurizon Network's approach

Aurizon Network advised that its UT5 maintenance cost proposal reflects a balanced asset management approach, is compliant with its legislative, regulatory and contractual obligations and has been informed by Aurizon Network's professional engineering judgements. Aurizon Network stated that the overarching strategic objective of its UT5 maintenance cost proposal was to deliver an appropriate balance between the following business priorities.[619]

(1) To meet producer demand for a reliable and available network that is capable of delivering all of its contracted services.

(2) To provide consistent and reliable access to the service at an efficient level of cost.

[619] Aurizon Network, sub. 1: 150.

(3) To plan and execute maintenance activities to deliver productivity and efficiency gains, reduce below-rail delays and cancellations, and improve operational performance to plan.

(4) To optimise the life of assets while balancing the tension between investment in maintenance and capital. [620]

Aurizon Network said its proposed forecast costs should be considered efficient because they are based on 2014–15 allowances approved in the UT4 allowance and are consistent with Aurizon Network's actual costs in 2014–15.[621]

Stakeholder submissions

Stakeholders raised a number of issues regarding Aurizon Network's proposed maintenance allowance, which the QCA has considered in its decision.

Submissions requested the QCA undertake a detailed efficiency review of the proposed UT5 maintenance cost proposal, including the efficiency of the processes underpinning maintenance services.[622] Some stakeholders noted they did not have access to enough information for them to form views on the proposed maintenance expenditure and were heavily reliant on the QCA's assessment.[623] The QRC said that given that Aurizon Network's proposed maintenance cost allowance constitutes approximately 20 per cent of Aurizon Network's proposed MAR, the QCA should scrutinise the efficiency and appropriateness of the maintenance cost allowance being claimed.[624]

The QCA's approach to assessment

The QCA's role is to assess the maintenance allowance proposed by Aurizon Network in providing below-rail services to coal-carrying trains when considering the reference tariffs and allowable revenues in the 2017 DAU, having regard to the factors in s. 138(2) of the QCA Act.

In light of stakeholder concerns the QCA has undertaken a detailed and thorough investigation into Aurizon Network's maintenance proposal to test the reasonableness of the proposed maintenance allowance.

Key considerations are whether the UT5 total forecast maintenance allowance is:

- justified with reference to identified and defensible scope, standard and/or cost drivers
- supported with evidence to demonstrate efficiency, having regard to supply chain requirements.

In making this decision, we have had regard to the factors in s. 138(2) of the QCA Act including the legitimate business interests of Aurizon Network, the interests of its customers and the public and whether the proposed maintenance allowance is sufficient for Aurizon Network to recover at least its efficient costs of maintaining the service. In doing so, our approach (illustrated in Figure 18) involves:

[620] Aurizon Network, sub. 40: 187 — Aurizon Network's March 2018 submission reiterated this approach, stating it "seeks to strike an appropriate balance between cost, asset availability and asset reliability.
[621] Aurizon Network, sub. 1: 163.
[622] QCoal, sub. 16: 7–8; Anglo American, sub. 18: 9; QRC, sub. 21: 39; BMA, sub. 24: 3.
[623] Anglo American, sub 57: 7; Glencore, sub. 60: 2.
[624] QRC, sub. 21: 40.

(1) Reviewing Aurizon Network's proposed maintenance expenditure, by considering forecasting methods, base year efficiency, cost allocation, step changes and rates of escalation

(2) Developing alternative estimates of maintenance expenditure, based on the findings of the review

(3) Assessing Aurizon Network's proposed expenditure against the QCA alternative estimates, in aggregate:

    (a) If the difference is not material, approve the proposed allowance.

    (b) If the difference is material, reject the proposed allowance and substitute it with the QCA's alternative estimate.

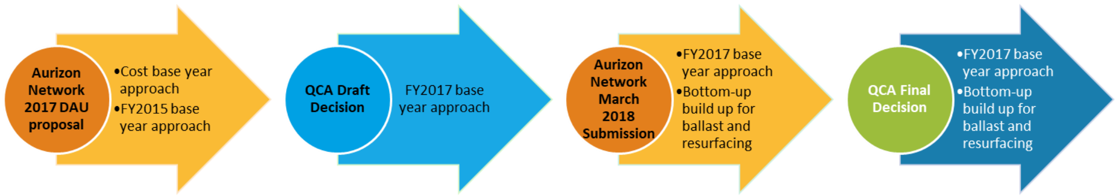
Figure 18 QCA's maintenance expenditure assessment approach

Aurizon Network has sought to use a base year approach to develop the key components of its UT5 maintenance cost proposal. In the QCA's view, this method could be used to establish a reasonable allowance within which Aurizon Network can prudently and efficiently maintain its network for the duration of a regulatory period. However, this approach involves determining a reasonable base year level of costs (that reflects efficient costs), applying reasonable escalations and reasonable step changes, and recognising expected productivity improvements. After having regard to the matters set out in s. 138(2) of the QCA Act, the QCA does not consider it appropriate to approve Aurizon Network's 2017 DAU proposal, except its proposed rail grinding and traction power costs.

The QCA has considered two alternative estimates in our assessment of Aurizon Network's maintenance proposal. One alternative estimate was sought using a bottom-up, cost build-up approach, but given these estimates were heavily qualified by GHD, the QCA also considered an alternative estimate using a revised base year approach. This approach, as applied in the draft decision, involves the adoption of 2016–17 actual costs as an appropriate base year.

In response to the draft decision, Aurizon Network indicated its 'in principle' support for the adoption of a 2016–17 base year to derive costs for its non-mechanised maintenance categories. In cases where Aurizon Network has not supported this approach, or suggested adjustments to the base year, the QCA has undertaken a detailed review of its revisions to test its appropriateness. Where Aurizon Network has been able to provide sufficient justification and evidence in support of its suggested revisions, the QCA has adopted Aurizon Network's revised costs.

Figure 19 Key approaches used to derive direct maintenance costs



The QCA has allowed Aurizon Network significant opportunity to provide material in support of its maintenance claim. During the course of the investigation, extensive information was requested from, and supplied by, Aurizon Network. In addition, a number of in-person interviews were held between key Aurizon Network staff, QCA staff and our consultant GHD.

The significant additional information gathered has informed our assessment. While this information is not in all cases directly referred to in our analysis, we have considered it in making our decision.

Acknowledging maintenance costs as part of a broader asset management approach

In assessing Aurizon Network's 2017 DAU and forming a view on the proposed maintenance allowance, the QCA is required to have regard to factors set out in s. 138(2) of the QCA Act, including the object of Part 5 in s. 69E, which is to:

> Promote the economically efficient operation of, use of and investment in the significant infrastructure by which services are provided, with the effect of promoting effective competition in upstream and downstream markets.

These factors also require the QCA to have regard to the pricing principles outlined in s.168A, which includes that the price for access to the declared service should generate expected revenue for the service that is at least enough to meet the efficient cost of providing access to the service and include a return on investment commensurate with regulatory and commercial risks involved.

In its March 2018 submission, Aurizon Network stated that the QCA's assessment of the maintenance allowance focuses on cost minimisation with no apparent consideration of the consequential impacts on supply chain throughput.[625] Aurizon Network raised concerns that

[625] Aurizon Network, sub. 40: 11, 188, 190–191; Aurizon Network, sub. 64: 4–5.

maintenance matters were considered independently of other critical elements such as investment in, and operation of the CQCN.[626]

In forming our view on Aurizon Network's 2017 DAU maintenance proposal, consistent with the requirements of the QCA Act, we have not considered maintenance in isolation. Rather the QCA recognises Aurizon Network's maintenance proposal as part of a broader asset management approach, including capital expenditure recognition and forecast capital expenditure allowances, as well as the QCA's approved WACC.

In this regard, the QCA also acknowledges the trade-off between completing maintenance activities and the operational and logistical needs of the broader supply chain. It is expected that a well-run-railway has the capacity to consider potential trade-offs and reach an appropriate balance between cost, asset availability and asset reliability. In reaching our decision on an appropriate maintenance cost allowance, the QCA has considered the interest of Aurizon Network, access holders and access seekers (s. 138(2)(b), (e) and (h)) and has not sought cost minimisation at the expense of supply chain efficiency. This approach has been supported by stakeholders.[627]

8.5 Direct costs

Aurizon Network's 2017 DAU proposal for direct maintenance costs

Aurizon Network's 2017 DAU proposal included a maintenance allowance for UT5 based on its UT4 approved maintenance allowance for 2014–15,[628] and then applied the following methodologies: [629]

- roll-forward of the 2014–15 approved scope and allowance (unit rate) for ballast undercutting renewals and escalating by MCI
- roll-forward of the 2014–15 reported actuals of the scope and cost for resurfacing, general maintenance, signalling, telecommunications, traction power, and structures, converting each category into a unit rate, and then escalating by MCI
- direct cost pass-through of the new rail grinding service contract
- inclusion of a new cost category 'Maintenance Planning and Support' based on historical timesheets identifying the UT4 costs incurred in this new category.

Aurizon Network then adjusted the individual categories to account for material changes that have occurred since 2014–15.

Aurizon Network said its proposed forecast UT5 maintenance allowance should be considered efficient because it is based on the QCA approved 2014–15 allowance and is consistent with Aurizon Network's actual costs in 2014–15. However, in circumstances where the QCA-approved 2014–15 allowance was not consistent with the actual cost, Aurizon Network provided reasons where actual costs should be considered as the efficient equivalent.

[626] Aurizon Network, sub. 64: 3.
[627] QRC, sub. 53: 28; Glencore, sub. 60: 2; Pacific National, sub. 19: 6; Pacific National, sub. 61: 11–12.
[628] Aurizon Network, sub. 1: 158.
[629] Aurizon Network, sub. 1: 159.

Stakeholder submissions

Stakeholders had significant concerns with the forecasting approach underpinning Aurizon Network's 2017 DAU and supporting material. These are outlined in the following tables.

Table 72 Stakeholder concerns regarding Aurizon Network's 2017 DAU - forecasting approach

Stakeholder	***Comments***
QRC	The QRC did not consider it appropriate to employ Aurizon Network's methodology of converting the UT4 allowance to unit rates and then escalating at MCI, given the allowances were approved as total allowances in UT4, not unit rates. The QRC held concerns that using unit rates means fixed maintenance costs are treated as entirely variable in nature.[630] Approved UT4 costs presumably reflect the QCA's views of efficient maintenance costs at the point of approval, not a minimum base which Aurizon Network can automatically maintain. Any assessment of maintenance costs based on the efficiency of the UT4 maintenance allowance is not a guarantee that costs are prudent and efficient. Given increasing coal volumes, a general efficiency dividend of 1–3% should be achievable; yet, unit cost reductions in real terms are not apparent in the UT5 maintenance cost proposal.[631]
Anglo American	The UT4 approval of maintenance expenditure by the QCA does not necessarily mean it is appropriate for UT5. The UT5 maintenance cost proposal is 19% higher in nominal terms compared to UT4.[632] Anglo American expressed concern about the use of UT4 as a baseline.[633]
QCoal	There is no reason why the scope and budget for one period should simply reflect that of the previous period with costs escalated.[634]

Table 73 Stakeholder concerns regarding Aurizon Network's 2017 DAU - scope and costs

Stakeholder	***Comments***
QRC	Aurizon Network's innovative asset management methodologies do not seem to have produced lower costs in UT5.[635] Aurizon Network has an incentive to 'gold-plate' or 'over-engineer' maintenance costs as it gets to recover these costs as well as reduce risks for Aurizon Operations.[636] Maintenance tasks should not be linked to the capital value of the RAB. Newer assets such as GAPE and WIRP should involve lower maintenance costs, given their recent development and under-utilisation. The QRC referenced Aurizon Network's previous statements, which stated WIRP incremental maintenance tasks would be limited to scheduled preventative maintenance.[637] The QRC noted significant reliance on the QCA (and any expert consultant it engages) in order to scrutinise the efficiency and appropriateness of the maintenance cost allowance being claimed.[638] They stated the QCA should give careful consideration to tools to provide certainty that maintenance costs remain prudent and efficient across the regulatory term and require more detail on maintenance costs and activities be made public.[639, 640]

[630] QRC, sub. 21: 42.
[631] QRC, sub. 21: 43.
[632] Anglo American, sub. 18: 9.
[633] Anglo American, sub. 18: 9.
[634] QCoal, sub. 16: 7.
[635] QRC, sub. 21: 43; sub. 29: 5.
[636] QRC, sub. 21: 39–40.
[637] QRC, sub. 21: 41–42; sub. 29: 5.
[638] QRC, sub. 21: 40.
[639] QRC, sub 21: 40.

Anglo American	It is still not clear whether scope is prudent and therefore whether the amounts claimed are representative of efficient maintenance costs. Anglo American submitted that it is excessive in circumstances where Aurizon Network 'maintains built capacity' compared to volumes.[641] Further scrutiny is required for areas carried out by either Aurizon Network or a related party, as it is in the group's interests to over scope the activities and claim.[642]
BMA	It is not clear whether Aurizon Network has taken into account past performance in delivering its maintenance program. Aurizon Network's performance of actual to planned scope was a key issue highlighted in UT4.[643] BMA finds it challenging to understand how various improvements, productivity initiatives, technology advancements and better information have not impacted (reduced) the overall level of costs proposed, or resulted in significant scope increases able to be performed at the same level of costs.[644]
QCoal	The approach to developing a maintenance budget for new systems such as GAPE should require great scrutiny, as these systems will not have the same maintenance requirements as older systems.[645]
Fitzroy	Fitzroy would be expecting to see the financial benefit of efficiency measure such as the movement from a reactive to preventative maintenance approach starting to flow through the UT5 maintenance allowance via a reduction in the nominal costs.[646]

In addition, a number of stakeholders raised specific concerns in relation to individual maintenance activities. In particular, Anglo American questioned the efficiency of Aurizon Network's rail grinding contract, and suggested further granularity be required as to the treatment of the capital and operational costs of new machinery, including the new ballast undercutting machine (RM902).[647] BMA had particular concerns regarding scope and cost of ballast undercutting.[648]

The QRC noted concerns regarding scope of ballast undercutting and the procurement of the new ballast undercutting machine (RM902), the productivity and efficiency of ballast undercutting, rail grinding and resurfacing costs. Concerns were raised in regards Aurizon Network's approach to determine general maintenance scope, the appropriate allocation of traction engineers and the impact of the new cost category — maintenance planning and support.[649]

In its collaborative submission and March 2018 submission, Aurizon Network responded to the above concerns raised by stakeholders. Specifically, Aurizon Network provided a level of additional information to stakeholders, addressed inconsistencies and clarified statements made in its 2017 DAU proposal. Aurizon Network did not agree with stakeholder concerns. [650]

[640] QRC, sub. 29: 4–5 — In its collaborative submission, the QRC acknowledged the maintenance presentation to stakeholders on the 13 March 2017 was a positive starting point for improving transparency, however the level of information still remains insufficient.
[641] Anglo American, sub. 18: 10.
[642] Anglo American, sub. 18: 10.
[643] BMA, sub. 24: 3.
[644] BMA, sub. 24: 3.
[645] QCoal, sub. 16: 7.
[646] Fitzroy, sub. 22: 2.
[647] Anglo American, sub. 18: 10.
[648] BMA, sub. 24: 3—5.
[649] QRC, sub. 21: 43—45.
[650] Aurizon Network, sub. 26: 14–19; sub. 40: 251–252.

QCA Analysis

The QCA does not accept Aurizon Network's 2017 DAU maintenance proposal, with the exception of rail grinding and traction power.[651] Consistent with the draft decision, the QCA considers that adopting Aurizon Network's 2017 DAU maintenance proposal would not advance the object of part 5 of the Act (s. 138(2)(a)), nor is it in the interests of access holders, access seekers and the public interest (s. 138(2) (d), (e) and (h)) as:

- The UT4 allowance was determined to be reasonable, but not necessarily efficient[652] and was based on 2011–12 actual cost data,[653] converted into annual unit rates for each maintenance category. The QCA would have expected Aurizon Network to update its UT5 maintenance program of works to reflect market, business and customer changes that have occurred since 2011–12.[654]
- Aurizon Network has been unable to demonstrate that it has given due attention to cost control processes, the efficiency of its resources (labour and equipment) and longer-term productivity initiatives to maintain the network. For example, there was limited supporting evidence that Aurizon Network has an effective governance system in place to guide decision-making on the cost and service quality trade-offs (between capital, maintenance and network operations) as they emerge in the conduct of its business.
- The QCA also has concerns regarding the trade-offs that Aurizon Network must manage when maintaining the network in accordance with its 'Asset Management Paradigm'[655]—in particular, where, when and how Aurizon Network decides to incur additional costs for maintenance activities to improve network path availability in a specific coal system, or more generally across the network.

The QCA has considered two alternative estimates to assess Aurizon Network's proposal:

- an alternative estimate, using a bottom-up, cost build-up approach
- an alternative estimate, using a revised base year approach.

Alternative estimates

The QCA sought to develop detailed bottom-up estimates of efficient maintenance costs on a category- or program-specific basis, engaging GHD to undertake an assessment of Aurizon Network's proposal.

GHD's assessment was informed by information provided by Aurizon Network through a request for information process under s. 185 of the QCA Act, as well as in-person interviews with key Aurizon Network staff. GHD however noted a number of limitations and deficiencies in the information provided by Aurizon Network and qualified a number of its key findings for this reason.

> The lack of structure in, and accuracy of, the information that Aurizon Network provided coupled with the time taken for Aurizon Network to provide necessary information and resolve

[651] The QCA's reasons for accepting Aurizon Network's 2017 DAU proposed costs for these categories are provided in section 8.5.5 and 8.5.6 below.
[652] QCA 2016c, Volume IV — Maximum Allowable Revenue: 113.
[653] Aurizon Network 2013b: 110 — Aurizon Network stated that the cost base for the UT4 maintenance price has been developed using the actual cost for the maintenance scope completed in 2011–12 as the starting point.
[654] QRC, sub. 53: 30 — The QRC supported this position.
[655] Aurizon Network, sub. 1: 151.

> our clarifications about data inconsistencies or errors has made the undertaking of the maintenance cost review problematic.[656]

GHD's advice noted that Aurizon Network's 2017 DAU proposal was not sufficiently justified, and based on the information available, was materially greater than that required to maintain the below-rail service for coal-carrying trains.

GHD identified a range of inefficiencies in the way in which Aurizon Network developed its forecast maintenance allowance. GHD raised concerns regarding the low levels of productivity currently derived from the fleet of maintenance track assets and deployment of labour resources based on the inefficient utilisation of its mechanised track assets. In particular, GHD noted that Aurizon Network does not maximise its possession times for maintenance activities.[657] GHD identified that there were opportunities to improve:

- The management of maintenance access windows.
- Productive time per shift.
- Monitoring of cost drivers.
- Assessment of trade-offs between the cost of maintenance and network performance.

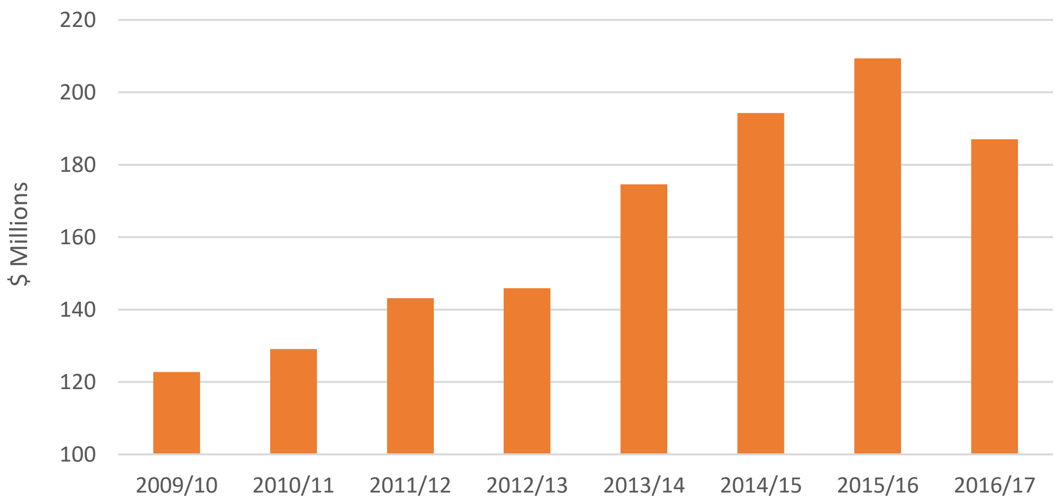
Further detail on these findings can be found in GHD's report, available on our website.

The QCA has not adopted the recommendations outlined by GHD in this decision. The QCA suggests that the various issues raised by GHD warrant further consideration by Aurizon Network.

Given GHD's qualifications, an alternative estimate was developed mirroring the base year approach utilised by Aurizon Network in its 2017 DAU proposal. While Aurizon Network's proposal is generally based on actual 2014–15 maintenance expenditure, during the course of the QCA's investigation 2016–17 actual maintenance information became available.

Total maintenance expenditure fell in 2016–17 (Figure 20) and was lower than Aurizon Network’s 2017 DAU proposed forecasting base year.

Figure 20 Total reported direct costs maintenance expenditure, 2009–10 to 2016–17

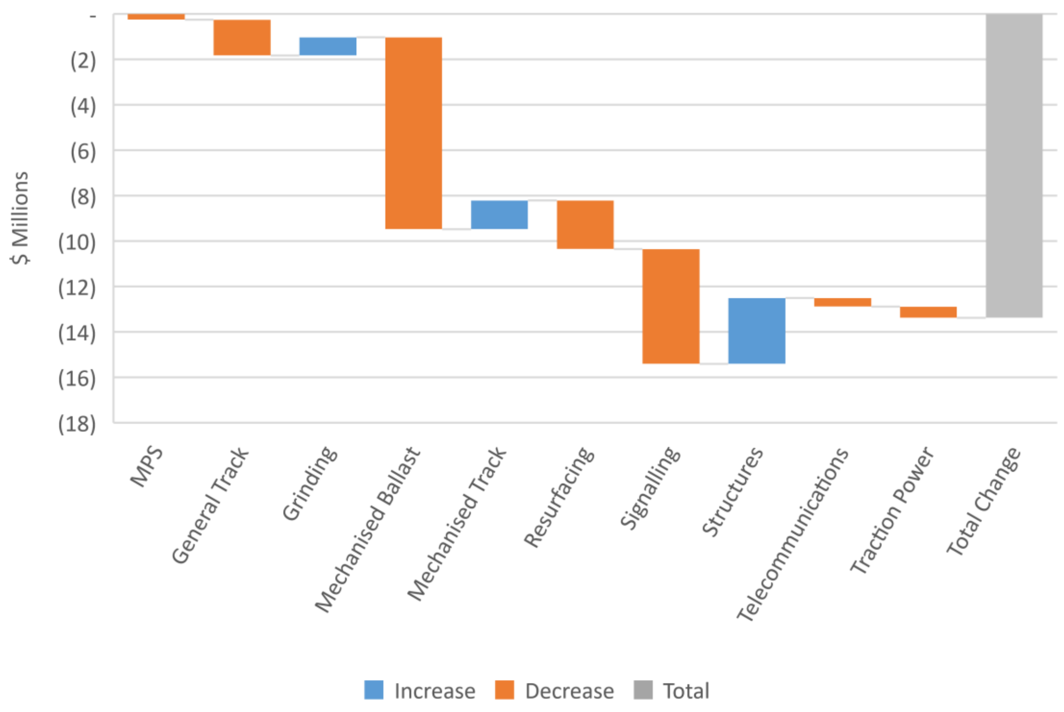


[656] GHD 2017: 12.
[657] GHD 2017: 16.

The 2016–17 maintenance expenditure was 11 per cent less than the 2015–16 expenditure but importantly 5 per cent less than the 2014–15 maintenance expenditure which was used as a base by Aurizon Network when developing its proposed maintenance allowance forecast.

As illustrated in the Figure 21, the reduced expenditure was driven by significant reductions in the cost of mechanised ballast undercutting renewals and signalling and moderate reductions in the costs of general track maintenance, resurfacing, telecommunications and traction power. Aurizon Network's FY2017 Maintenance cost report[658] also noted that grinding and signalling costs were higher than the approved maintenance cost allowance.

Figure 21 Difference in reported direct cost maintenance expenditure, 2014–15 and 2016–17



The QCA considers that 2016–17 actual costs represent an appropriate base year as they reflect up-to-date information, capture Aurizon Network's operating and service level standards and provide direct evidence that some of the UT4 productivity improvements have already started to flow through to Aurizon Network's bottom-line. [659]

Given concerns with Aurizon Network's 2017 DAU maintenance proposal (as discussed above), the QCA's draft decision adopted 2016–17 actual expenditure to be the baseline annual expenditure for all but three maintenance categories.

[658] Aurizon Network 2017f.

[659] Anglo American, sub. 57: 7; Pacific National, sub 66: 4 — Anglo American and Pacific National noted they are not uncomfortable with this approach.
QRC, sub 53: 30 — While the QRC continues to seek a proper bottom up assessment of Aurizon Network’s maintenance costs in the future, it supported the adoption of the base year approach.

8.5.1 QCA analysis on an appropriate forecast of direct maintenance costs

Aurizon Network's March 2018 submission provided a revised direct maintenance allowance, as outlined by category in Table 74.

Table 74 Aurizon Network's UT5 March 2018 revised direct maintenance cost forecast in nominal dollars ($m)

	2017–18	*2018–19*	*2019–20*	*2020–21*	*Total*
Direct maintenance costs					
Ballast undercutting renewals—mainline[1]	62.0	63.7	67.6	71.2	264.6
Ballast undercutting renewals—turnouts	4.5	4.4	4.5	4.6	18.0
Maintenance planning & support	5.0	5.1	5.3	5.4	20.8
General track [2]	52.6	55.4	57.4	59.1	224.4
Grinding—mainline	14.8	15.1	15.3	15.6	60.7
Grinding—turnout	4.0	4.1	4.2	4.3	16.6
Resurfacing—mainline [2]	15.1	16.7	16.7	17.4	66.0
Resurfacing—turnouts [2]	3.9	4.2	4.7	4.4	17.2
Signalling	22.4	22.9	23.5	24.1	93.0
Structures	6.3	6.4	6.6	6.7	26.0
Telecommunications	4.8	4.9	5.0	5.2	19.9
Traction power	10.2	10.4	10.5	10.7	41.8
Total	**205.6**	**213.3**	**221.4**	**228.7**	**869.0**

Note: (1) This is referred to as ballast undercutting in Aurizon Network's March 2018 submission; Includes GPR costs of $1.3 million in 2018–19 and 2020–21. (2) Resurfacing and general track costs are based on material subsequently provided by Aurizon Network in support of its March 2018 submission. Information provided by Aurizon Network indicated that the 2018 March submission included computational/transpositional errors for these cost categories. [660]

Broadly, Aurizon Network's March 2018 submission accepted the direct costs proposed in the draft decision (the QCA's alternative estimates as per the QCA's approach to assessment) for the majority of cost categories and supported, in principle, the application of a 2016–17 base year for non-mechanised maintenance activities.

However, Aurizon Network recommended estimates for ballast undercutting renewals and resurfacing be derived from bottom-up cost models, and suggested adjustments to the 2016–17 base year to account for several unusual circumstances that occurred during 2016–17.

The QCA's May 2018 Request for comments—maintenance allowance and practices paper, noted that the QCA was favourably disposed to accepting Aurizon Network's revised claim for

[660] Aurizon Network, Responses to QCA requests for information, 5 June 2018, 13 July 2018.

its direct maintenance costs, subject to it providing sufficient justification and evidence.[661] Aurizon Network and stakeholders supported this position.[662]

The QCA has adopted a reasonable approach to Aurizon Network's maintenance allowance. The QCA's decision adopts Aurizon Network's revised direct maintenance costs for all cost categories,[663, 664] however requires the transitional reclassification of ballast undercutting renewal costs from the maintenance allowance to capital expenditure in 2019–20 and 2020–21. In making this decision, the QCA has undertaken a detailed review of the March 2018 submission costs to test their appropriateness, and noted in many cases Aurizon Network has accepted the QCA's alternative estimate. The QCA considers that this appropriately balances the legitimate business interests of Aurizon Network (s. 138(2)(b)) with the interests of access seekers and access holders (ss. 138(2)(e), (h)). The QCA's decision allows Aurizon Network to recover at least efficient costs for maintaining the network. This is in the interests of access holders and access seekers in that it allows Aurizon Network to provide access to the service, to the standard and quality demanded by customers.

Table 75 Variance in costs by activity ($m)

Direct Cost Category	***Aurizon Network's March 2018 submission vs QCA draft decision***		***QCA decision vs Aurizon Network's March 2018 submission***	
Grinding — mainline	0.4		(0.4)	
Grinding — turnouts	0.2		(0.1)	
Traction Power	0.2		(0.3)	
Maintenance planning & support	0.2		(0.2)	
Resurfacing — mainline²	(3.4)		-	
Signalling	0.7		(0.7)	
Telecommunications	0.1		(0.1)	
Resurfacing — turnouts²	3.1		-	
Structures	9.3		(0.2)	
General track²	7.2		(1.2)	
Ballast undercutting renewals — mainline¹	42.9		(1.3)	
Ballast undercutting renewals — turnouts	1.9		-	

[661] QCA 2018b: iv.

[662] Aurizon Network, sub 64: 3, 5, 12; QRC, sub 53: 28; QRC, sub. 63:1–2; Anglo American, sub 57: 7; Glencore, sub 60: 7; Pacific National, sub. 66: 4.

[663] The variances outlined in Table 75 generally reflect the QCA's decision on the MCI which differs to Aurizon Network's March 2018 submission.

[664] With the exclusion of costs associated with one GPR run (equal to $1.3m), reflected in cost category ballast undercutting renewal—mainline.

Note: (1) Includes GPR costs. (2) Resurfacing and general track costs are based on material subsequently provided by Aurizon Network in support of its March 2018 submission. Information provided by Aurizon Network indicated that the 2018 March submission included computational/transpositional errors for these cost categories. [665]

The QCA's analysis of the revised maintenance allowance provided in Aurizon Network's March 2018 submission and supporting material, along with our decision on the appropriate forecast of direct costs for each maintenance category is outlined below.

8.5.2 Ballast undercutting renewals

Aurizon Network's March 2018 submission proposed a ballast undercutting renewals allowance that was $6.5 million higher than Aurizon Network's 2017 DAU proposal, and over $40 million higher than the draft decision allowance that applied unit rates achieved in 2016–17.

Aurizon Network's March 2018 submission said the increase was driven by a series of 'one off' factors that combined to make the 2016–17 base year costs applied in the draft decision significantly lower than the average costs expected during the UT5 pricing period, namely:

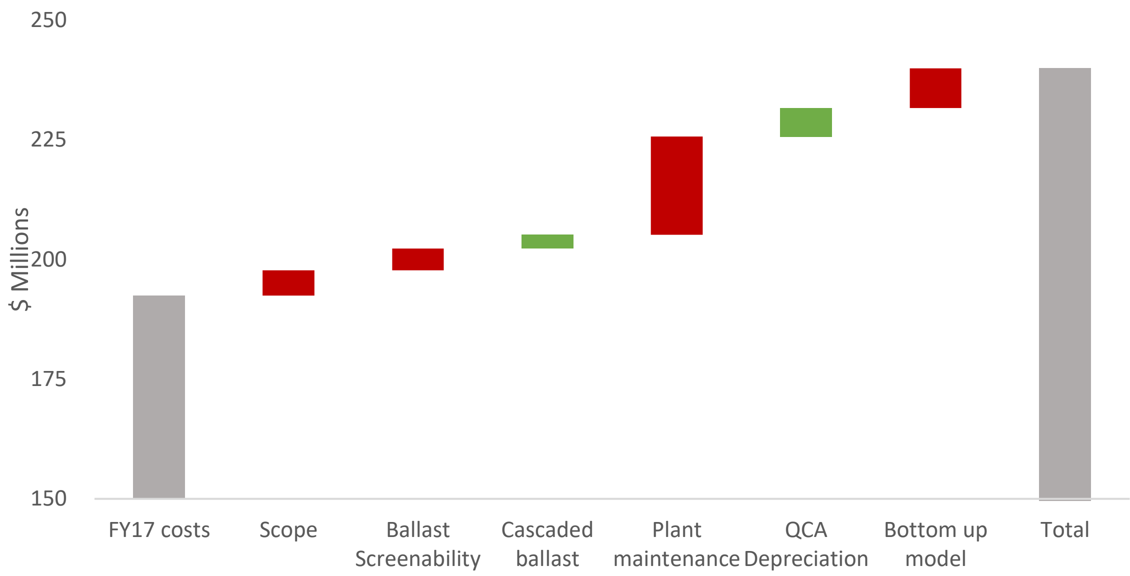
- unusually high ballast screenability which reduced ballast consumption and associated costs[666]
- the use of cascaded ballast which had been purchased in previous years but not fully utilized[667]
- unusually low plant maintenance costs[668]
- higher depreciation charges associated with the new ballast undercutting machine, that apply from 2019–20.[669]

In addition, Aurizon Network provided a bottom-up estimate of ballast undercutting renewal costs for each year of the UT5 pricing period. The estimated costs were around $10 million higher than the 2016–17 base year (including Aurizon Network's claimed adjustments to the base year) over the UT5 pricing period (Figure 22). The QCA and Aurizon Network have been unable to reconcile this variance.

While the draft decision raised concerns regarding the productivity of Aurizon Network's ballast undercutting renewals program, Aurizon Network stated that its bottom-up cost model included a number of productivity improvements. The bottom-up cost model applied a scope of 140 km for mainline undercutting and 42 turnouts per year for each year of the UT5 pricing period.[670] Aurizon Network strongly recommended that the QCA adopt this model, rather than an adjusted 2016–17 cost estimate.

[665] Aurizon Network, Responses to QCA requests for information, 5 June 2018, 13 July 2018.
[666] Aurizon Network, sub. 40: 211–214.
[667] Aurizon Network, sub. 40: 210–211.
[668] Aurizon Network, sub. 40: 214–215.
[669] These higher depreciation charges were accounted for in the roll forward of the 2016–17 maintenance cost proposed in the draft decision.
[670] The QCA's preliminary view did not consider Aurizon Network's 2017 DAU proposed ballast undercutting renewals—mainline scope of 149km in 2019–20 and 2020–21 appropriate.
Aurizon Network, sub. 40: 215–216 — Aurizon Network accepted this position. QRC, sub. 53: 31 — The QRC supported this position.

Figure 22 Aurizon Network's revised ballast undercutting renewal costs ($m)



Pacific National stated there should be a continued focus by the QCA on the efficient costs of ballast undercutting, noting it has been a concern both in previous undertakings and the current draft access undertaking.[671]

To assist in our assessment of Aurizon Network's revised ballast undercutting renewal costs, the QCA sought further information and clarification on a range of aspects, allowing Aurizon Network sufficient opportunity to provide material in support of its revised March 2018 maintenance submission.

Scope

Aurizon Network's forecast ballast undercutting renewals scope for UT5 is aligned to the UT4 final decision. While the QCA's consultant in UT4 (CMT) did indicate a requirement to undercut an average of 140km per year during 2014–15 to 2016–17, its review of Aurizon Network's ballast undercutting renewals proposal for UT4 identified significant methodological and data quality issues with the GPR calculation, including significant anomalies between the two GPR readings (2012 and 2014) relied upon.[672]

In regards to the turnout scope, CMT's UT4 review highlighted significant uncertainty with respect to the required turnout undercutting scope. The primary reason that CMT suggested a scope lower than that forecast by Aurizon Network for UT4 was not because of technical reasons, but instead because it represented 'a reasonable compromise position to support works to maintain track integrity while also reducing the incidence of customers paying twice for turnout works'.[673]

[671] Pacific National, sub. 66: 4.
[672] CMT 2015: 21.
[673] CMT 2015: 41.

There remains a level of uncertainty associated with the estimated ballast undercutting renewals scope. Aurizon Network has not provided assurances that the most recent GPR data (2016) has been directly used to determine forecast UT5 scope.[674]

Ballast screenability and cascaded ballast

Aurizon Network provided information that ballast screenability in 2016–17 was 74 per cent, which was above the UT4 average of 71 per cent.[675] Aurizon Network stated that the portion of ballast screened has a significant influence on the costs associated with each ballast undercutting renewals job and that an additional $1.18 million should be added to base year costs to reflect this.

This estimate was based on a 1 per cent decrease in screenability equating to an additional ballast material cost of $3,217 per km, which was applied to the total 140 km of scope expected to be achieved in each year of the UT5 pricing period.

The QCA notes that the ballast undercutting machine has screening capabilities, whereas the excavator does not. However, Aurizon Network has sought an increase in costs based on kilometres undercut by both product categories (ballast undercutting machine and excavator).

Taking into account only those kilometres undercut by the ballast undercutting machine reduces the proposed adjustment by 22.4 per cent.

The QCA notes that the rate of screenability is influenced by a number of factors, including:

- climatic conditions (moisture, rainfall, heat) — this affects the level of screenability (for example, dry coal ballast and fines are relatively easier to screen than wet ballast and fines);[676]
- length of the job and its position — this will determine whether the ballast undercutting machine is used or if the excavator, which does not have screening capabilities is appropriate.[677]

The QCA accepts the rate of screenability may be difficult to forecast with accuracy.

The QCA accepts that a proportion of the ballast used in 2016–17 was cascaded from 2015–16. Aurizon Network has stated that a unique set of circumstances in 2015–16 resulted in 19,000 m^3 of ballast material being purchased, but not used (cascaded ballast), and this ballast was utilised by the ballast undercutting machine in 2016–17, reducing costs.[678]

Plant Maintenance

Aurizon Network stated that the plant maintenance costs for the ballast undercutter in 2016–17 were lower than would be expected in a typical year.

In addition, Aurizon Network stated that ballast undercutting renewal costs should be increased further in 2019–20 and 2020–21 to account for increased plant maintenance costs associated with running the larger, more complex new ballast undercutting machine (RM902).[679]

[674] Aurizon Network, Response to QCA request for information, 29 June 2018 — Aurizon Network stated ballast undercutting scope is aligned to the UT4 final decision. GPR data (2016) has been used as part of the prioritisation of scope process.
[675] Aurizon Network, sub. 40: 212.
[676] Aurizon Network, sub. 40: 211.
[677] Aurizon Network, sub. 40: 212.
[678] Aurizon Network, sub. 40: 210.
[679] Aurizon Network, sub. 40: 214–215.

Information provided by Aurizon Network generally supports an increase in plant maintenance costs over the UT5 pricing period.[680] However, it is not clear to the QCA whether the increase proposed by Aurizon Network in its March 2018 submission is reasonable. In particular, it is unclear why lower levels of plant maintenance expenditure experienced in 2016–17, associated with the pending replacement of the ballast undercutting machine are not carried through into 2017–18.

The QCA notes that there is a high level of uncertainty with forecast plant maintenance expenditure provided by Aurizon Network.

Bottom-up model

Aurizon Network strongly recommended that the QCA adopt the results of its bottom-up ballast undercutting renewal cost model for UT5. The bottom-up model produces ballast undercutting renewal cost forecasts that are around $10 million higher than the 2016–17 base year (including Aurizon Network's claimed base year adjustments) over the UT5 pricing period.

Aurizon Network advised that forecast and actual costs are accounted for in different ways and, as a result it was unable to calibrate its bottom-up model estimates with the previous year's expenditure.[681]

The absence of this reconciliation makes it difficult to identify which line items within the bottom-up model are forecast to increase or decrease and their underlying cost drivers. Aurizon Network has noted that, at a high level, the costs of mechanised ballast undercutting renewals are dependent on a number of factors, including:

- fouling levels
- track access
- geography
- distance from stow location
- climatic conditions (moisture, rainfall, heat)
- mode of undercutting (ballast undercutting machine or excavator).[682]

The QCA notes that it can be difficult to forecast all of the above factors with accuracy and in some cases Aurizon Network is required to make assumptions on the above factors. Therefore, there is a high degree of uncertainty associated with Aurizon Network's forecast costs.

8.5.3 Treatment of ballast undercutting renewal expenditure

Aurizon Network has included forecast ballast undercutting renewal costs as an expensed amount within its proposed maintenance cost allowance. In total, the proposed direct costs of this activity amount to $276 million over the UT5 pricing period.

The QCA has considered the merits, or otherwise, of treating ballast undercutting renewal costs as a capital expense item. While this issue first arose during the UT4 investigation, the QCA decided not to capitalise ballast undercutting renewal expenditure at that time. However, the QCA signalled that it would reconsider this issue during the UT5 investigation.[683]

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[680] Aurizon Network, Response to QCA request for information, 5 June 2018.
[681] Aurizon Network, Response to QCA request for information, 5 June 2018.
[682] Aurizon Network, sub. 64: 17.
[683] QCA 2014e: 151.

The QCA's reconsideration of this issue was prompted by our assessment of Aurizon Network's March 2018 submission in relation to operating costs (Chapter 7), in which Aurizon Network sought to reclassify some previously capitalised costs as expensed corporate overheads (see section 7.6.3). In assessing the reasonableness of this proposal, the QCA sought to understand the recognition of these costs within the context of Aurizon Network's capitalisation policy. As discussed in section 7.6.3, the QCA accepts that expensing of these previously capitalised costs appears consistent with Aurizon Network's capitalisation policy and relevant accounting standards.

The QCA considers that accepting Aurizon Network's March 2018 proposal to expense costs that were previously capitalised also requires the QCA to consider the appropriate recognition of costs across Aurizon Network's other activities, specifically, renewals.

The QCA notes ballast undercutting is recognised as a renewal activity in Aurizon Network's Asset Maintenance and Renewals Policy (AMRP).[684] The characteristics of ballast undercutting renewals, as discussed in further detail below, tend to support its recognition as a capital expense item.

This is supported by the fact ballast undercutting renewals are explicitly recognised as capital expenditure in Aurizon's group capitalisation policy.[685] As such, ballast undercutting renewal costs are reported as a capital expense for the purposes of Aurizon Network's statutory financial accounts. Aurizon Network noted that this has been the case since 2011.[686]

In considering the appropriate regulatory treatment of ballast undercutting renewal costs, the QCA sought further information from Aurizon Network to reach an informed conclusion on this issue. Through this request for information process, Aurizon Network contended that the regulatory treatment of ballast undercutting as maintenance expenditure promotes economic efficiency when the allowance is set at the appropriate amount and, as such, the QCA should not seek to amend this approach.[687] Additional concerns raised by Aurizon Network through the request for information process are addressed below.

Table 76 Aurizon Network comments on treatment of ballast undercutting renewal costs

Aurizon Network comment[688]	***QCA responses***
There is no requirement for the regulatory treatment of ballast undercutting expenditure to mirror the accounting treatment. The regulatory treatment of expensing ballast undercutting costs has remained unchanged since UT1.	The QCA accepts there is no requirement for the regulatory treatment of ballast undercutting renewal costs to mirror the accounting treatment. Nonetheless, inconsistent treatment allows Aurizon Network opportunity to selectively apply its capitalisation policies for the purpose of delivering desired cash flow outcomes, rather than to promote economically efficient outcomes. The QCA does not consider this in the interests of access holders, access seekers and the public interest (ss. 138(2) (d), (e), (h)). The QCA considers it appropriate for Aurizon Network to apply the Aurizon group capitalisation policy, in terms of treatment of costs, consistently for regulatory purposes, unless there are compelling economic efficiency grounds to do otherwise.

684 Aurizon Network, Asset maintenance and renewal policy, August 2017: 17–18.
685 Aurizon Holdings, Group Accounting Policy Manual–Property, plant and equipment, February 2016: 6.
686 Aurizon Network, Response to QCA request for information (issued 4 July 2018), 13 July 2018.
687 Aurizon Network, Response to QCA request for information (issued 4 July 2018), 13 July 2018.
688 Aurizon Network, Response to QCA request for information (issued 4 July 2018), 13 July 2018.

Aurizon Network comment[688]	*QCA responses*
The accounting policy to capitalise ballast undercutting costs was adopted on 1 July 2011, which the QCA will note was prior to the submission of Aurizon Network's 2014 Draft Access Undertaking (UT4) in April 2013. As part of the investigation process for UT4, Aurizon Network discussed and explained this matter in detail with QCA staff. The QCA's UT4 Final Decision did not seek to amend the regulatory approach to ballast undercutting costs.	The QCA has considered Aurizon Network's 2017 DAU afresh. As noted in the QCA's UT4 draft decision, the appropriate treatment of ballast undercutting renewal costs remained subject to further consideration in the UT5 investigation. The QCA said: *"However, we note that the costs of ballast undercutting have many of the features which would be considered to be renewals expenditure. We intend to keep the issue of whether ballast undercutting being treated as renewals expenditure open for consideration for UT5." (QCA 2014e: 151.)* *"Whether ballast undercutting should also be treated as renewals expenditure is less clear-cut and based on the evidence before us at this time, we are presently consider it should continue to be as maintenance. We note, however, that the 2014 DAU renewals expenditure forecasts already include an element of ballast undercutting. The 2014 DAU renewals program includes a civil and track assets renewal program in the Blackwater, Moura and Goonyella systems. This is an issue we propose to revisit again in UT5." (QCA 2014e: 168.)* The decision to reconsider this matter arose through the QCA's assessment of Aurizon Network's March 2018 submission, which proposed to expense corporate overhead costs that were previously recognised as capital expenditure (see Chapter 7). The QCA notes that Aurizon Network classifies ballast undercutting as a renewal activity in the AMRP and the characteristics of ballast undercutting renewals tend to support its recognition as a capital expense item. Renewal costs are capitalised in Aurizon Network's statutory accounts, while non-renewal activities are expensed.
Aurizon Network contends that it is inappropriate for the QCA to introduce new matters at this late stage in the regulatory process. Aurizon Network is concerned that the QCA has not followed due process when introducing this material matter; particularly considering the lack of prior consultation and the material financial consequences that would result from such a change.	Consistent with the *QCA's Statement of Regulatory Intent*, information was requested from Aurizon Network in relation to this matter. In doing so, these issues were raised with Aurizon Network and Aurizon Network provided its response in July 2018. The financial consequences for Aurizon Network associated with capitalising ballast undercutting renewal costs need to be balanced with the corresponding impacts on reference tariffs payable by access holders and access seekers. While the capitalisation of ballast undercutting renewals may have a cash flow impact, transitional arrangements can be implemented to mitigate the extent of the cash flow impact within the UT5 capital indicator and maintenance cost allowance.
The QCA should also note, that there are other instances where the regulatory and accounting treatments differ; one such example is the difference between Accounting and Regulatory Asset Lives for individual asset classes within the RAB which has been endorsed by the QCA.	For clarity, this decision relates to the treatment/recognition of renewals as an expense or capital item. The QCA has not made a decision relating to other accounting policy aspects.
Treating ballast undercutting costs as maintenance expenditure appropriately matches cost recovery to the parties who impose the costs in the first place. For example, the key determinants of ballast undercutting scope include coal fouling and ballast degradation from the passage of rollingstock hauling from coal producing mines. Capitalising ballast	Intertemporal concerns are not isolated to ballast undercutting renewals. For example, the cost of wear and tear on rail by current users, is passed onto future users through the rail renewals program which is classified as capital expenditure. Regardless of this, rail renewal extends the useful life of the asset and if it were to be classified as maintenance, today's users would effectively subsidise future users by bearing the full costs of an asset that will also be used by the latter. This is also the case for ballast undercutting renewals. Aurizon

Aurizon Network comment[688]	*QCA responses*
undercutting expenditure will have the effect of transferring the costs of past coal fouling and degradation on to future users of the service. This is unlikely to promote efficient behaviours from current Access Holders in the short/medium term.	Network's ballast undercutting renewal program involves the large scale replacement of a capital item (ballast) which extends the useful life of the asset. Current users should not be required to subsidise future users. The QCA notes Schedule J of Aurizon Network's 2017 DAU outlines coal loss mitigation obligations on private infrastructure owners. These obligations should help to promote efficient behaviours in relation to coal fouling. In addition, historical data reveals a large variation between forecast scope (for both mainline and turnouts) and the actual scope completed within each system in previous years. Forecasting ballast undercutting renewal costs results in a materially different split of costs between systems, than actual costs (see Table 77 below). The approval of ballast undercutting renewals on an *ex post* basis, (as would be the case if these costs were capitalised) would result in a more cost reflective allocation of costs between systems.
The ballast undercutting production process itself creates uncertainty as to how costs should be treated. For example, where a job site contains ballast that can be screened, existing ballast is cleaned, returned to track and 'topped-up' if necessary. These jobs are more likely to be deemed a maintenance or operational activity.	The QCA notes that Aurizon Network's AMRP already provides a framework to consider these matters. For example, the AMRP isolates minor ballast undercutting activities for both mainline and turnouts — these costs are recognised as general track maintenance activities (rather than renewal activities).
Unlike rail, which is a linear asset with a clearly defined unit of measure (e.g. 109.5m lengths of rail are standard across the CQCN), ballast is a 'volumetric' asset. In other words, the quantum of ballast required in each undercutting job can vary significantly based on a number of site-specific factors, including the extent of fouling/degradation, and the depth and width of the ballast profile.	Aurizon Network's AMRP already provides a framework to consider these matters. The QCA notes the inherent uncertainty associated with forecasting ballast undercutting renewal costs as demonstrated by the historical variance between forecast and actual scope by system (see Table 77 below). The capitalisation of ballast undercutting renewal costs would mean these costs become subject to an ex post assessment. Through the *ex post* assessment process, Aurizon Network could seek to recover actual ballast undercutting renewal costs that it has incurred prudently and efficiently. This approach removes the risk associated with forecasts based on assumptions of site specific factors.
The volumetric nature of ballast will also make it difficult to accurately assess the quantum of RAB disposals. For example, if a 1m^3 section of ballast was added to the RAB and subsequently undercut at a later date, it would be inappropriate to set the value of an asset disposal by reference to weight or volume because by its nature, spoiled ballast contains additional contaminants that are not present in clean ballast.	As above. The QCA would expect that Aurizon Network has an established method and robust assumptions in place for the purposes of reporting asset values and disposals (including ballast) in the statutory accounts. It is not clear to the QCA why this would present a barrier to a similar treatment of ballast undercutting costs for regulatory purposes. Moreover, expensing these costs would not provide any recognition of asset disposal costs that may need to be assessed.
Ballast undercutting expenditure is relatively consistent across years. Unlike capital programs (renewals or growth) that can vary from year to year by system, the ballast undercutting expenditure profile does not create material price	The QCA does not consider that the prospect of price volatility or otherwise is a determining factor in whether costs should be treated as capital or maintenance expenditure. Ballast undercutting is a renewal activity that performs functions supporting its recognition as a capital expense item. This is a relevant consideration.

Aurizon Network comment[688]	*QCA responses*
volatility for end customers.	
In comparison to all other track assets, ballast has a materially shorter useful life and this life can vary greatly across different parts and coal systems within the CQCN.	The QCA notes that Aurizon Network has previously stated that expected ballast life on the system due to the high levels of fouling are expected to be in the range of five to seven years (CMT, 2015: 6.). An expected ballast life of greater than five years is not inconsistent with Aurizon's capitalisation policy (Aurizon Holdings, Group Accounting Policy Manual–Property, plant and equipment, February 2016: 9.). The QCA does not consider the useful life of ballast undercutting renewals to be a determining factor in whether costs should be treated as capital or maintenance expenditure. There are mechanisms available to account for variations in the useful life of the asset across different parts of the CQCN, such as application of a weighted-average asset life.

Source: Aurizon Network, Response to QCA request for information (issued 4 July 2018), 13 July 2018.

The QCA considers that Aurizon Network has not demonstrated sound economic efficiency grounds for the continued expensing of ballast undercutting renewal costs for regulatory purposes, or significant barriers to their reclassification as capital expenditure during the UT5 pricing period. While Aurizon Network has articulated some potential practical challenges in capitalising ballast undercutting renewal costs for regulatory purposes, the QCA notes that Aurizon Network has capitalised these costs for accounting purposes since 2011. As such the QCA expects that Aurizon Network would have in place methods and assumptions to overcome these issues, to derive reportable costs with a level of accuracy and robustness befitting of statutory accounts required to comply with the *Corporations Act 2001*.

Moreover, the QCA considers there are compelling arguments in favour of recognising these costs as capital expenditure, discussed below.

Characteristics of ballast undercutting renewals

The majority of Aurizon Network's ballast undercutting activities are explicitly recognised as renewal activities in Aurizon Network's own AMRP. These activities include 'Ballast Undercutting Machine', 'Ballast Undercutting Major' and 'Ballast Undercutting — Complete Turnout'.[689]

The QCA agrees that ballast undercutting has characteristics consistent with renewal expenditure, which Aurizon's group capitalisation policy in turn recognises as a capitalised cost.[690] Relevantly, the functions of ballast tend to support its recognition as a capital expense item. Ballast is an essential structural component of the track which serves to absorb and transfer forces exerted by trains in order to keep the track in its correct position.[691] It also acts to ensure effective water drainage. The ability of ballast to effectively perform these functions depends on the condition of the ballast stones, and the degree of fouling (primarily due to the abrasion and breakdown of the ballast itself, and coal dust and particle accumulation).

Failing to clean or renew fouled ballast can cause a number of problems including; reduced track elasticity and ability to absorb and transfer load; decreased track strength; ineffective water drainage; and mud holes. These problems can compromise the structural integrity of the track asset, and may lead to damage to the formation, sleepers, fasteners and rolling stock.

[689] Aurizon Network, Asset maintenance and renewal policy, August 2017: 17–18.
[690] Aurizon Holdings, Group Accounting Policy Manual–Property, plant and equipment, February 2016: 6.
[691] Aurizon Network 2014b: 8.

Other consequences include increased speed restrictions, and in extreme cases, derailments.[692] Aurizon Network has acknowledged that ballast cleaning and replenishment, as a renewal activity, can significantly extend the life of the ballast asset.[693] This characteristic accords with Aurizon's group capitalisation policy which requires that costs to be capitalised should:

> increase the future economic benefits originally expected from the asset, usually either an increase in productive capacity, an additional ability to generate future economic benefits or an extension in the expected useful life.[694]

The effect of extending the useful life of the track asset also gives rise to distributional and intertemporal considerations regarding cost recovery. Specifically, expensing an activity that extends the useful life of the asset means current users are required to pay for the benefits future users will receive. The QCA does not consider this to be in the interests of access holders. Capitalising ballast undercutting renewal costs means the cost of the asset is recovered over the economic life of the ballast, along with a return on investment. As such, capitalising these costs would allow Aurizon Network to recover prudent and efficient ballast undercutting renewal costs, ensuring it can generate expected revenue that is at least enough to meet the efficient costs of providing access to the CQCN, while ensuring that current users are not subsidising future users of the network.

Recovery of efficient costs

While it is clearly not the QCA's role to prescribe the nature and scope of maintenance practices to be undertaken by Aurizon Network, it is the QCA's responsibility to have regard to the legitimate business interests of Aurizon Network (s. 138(2)(b) of the QCA Act). The QCA considers this will be advanced if Aurizon Network is compensated for at least efficient costs of operating and maintaining the CQCN, including maintaining and managing the ballast asset.

Stakeholders raised the efficiency and prudency of ballast undercutting renewals and other maintenance costs as a key concern.[695]

Despite an extensive information gathering process that allowed Aurizon Network sufficient opportunity to provide support for its claim, the QCA has concerns regarding the prudency and efficiency of Aurizon Network's revised ballast undercutting renewal costs provided in its March 2018 submission. The QCA considers certain aspects of Aurizon Network's March 2018 submission require further justification to provide ballast undercutting renewal costs over the UT5 pricing period that are approximately $40 million greater than costs applying achieved unit rates in FY2017. Further, it remains unclear why Aurizon Network's March 2018 submission includes additional ballast undercutting renewal costs of approximately $6.5 million above its 2017 DAU proposal, over the UT5 pricing period (see Figure 23). Detail on the QCA's concerns regarding the efficiency and scope of ballast undercutting renewals is discussed above in Section 8.5.2.

In light of this, the QCA considers that approving Aurizon Network's revised ballast undercutting renewal costs as part of the forecast maintenance allowance for the full 4 years of the UT5 pricing period would not be in the interests of access holders, access seekers and the public interest (ss. 138(2)(d), (e), (h).

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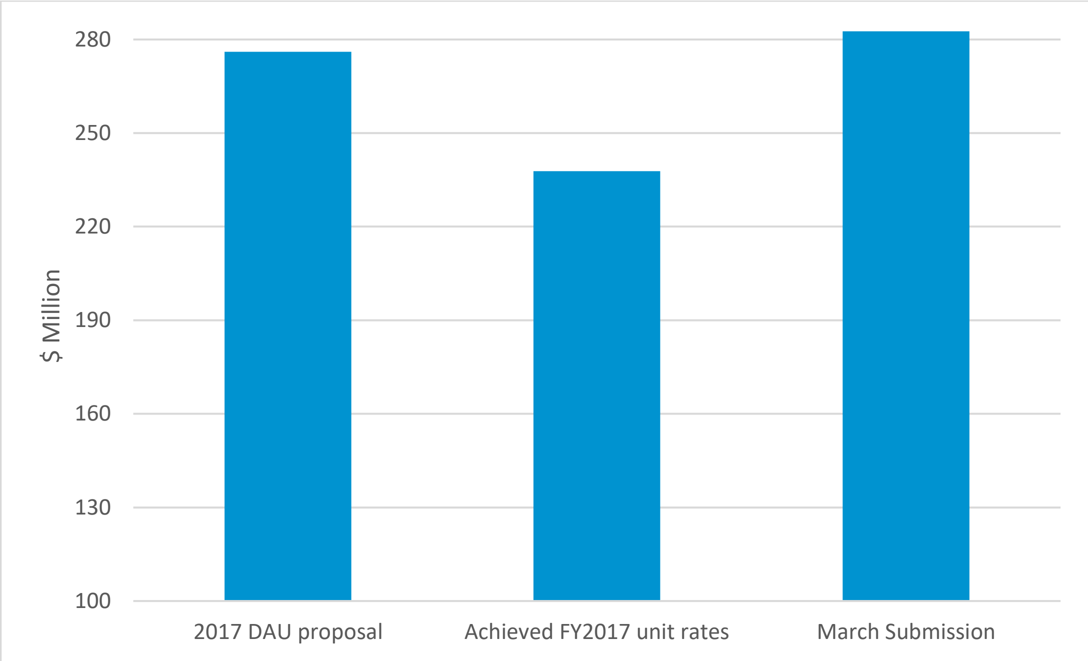
[692] Aurizon Network 2014b: 8–12.
[693] Aurizon Network 2014b: 9.
[694] Aurizon Holdings, Group Accounting Policy Manual–Property, plant and equipment, February 2016: 3.
[695] Pacific National, sub. 66: 4, 6; QRC, sub. 53: 30; BMA, sub. 24: 5; QCoal, sub. 16: 8.

Figure 23 UT5 pricing period ballast undercutting renewal costs



The uncertainty associated with forecasting ballast undercutting renewal costs is further illustrated in Table 77 which reveals there has historically been significant variance between forecast scope and the actual scope completed in each system. This indicates that expensing of ballast undercutting renewals based on an *ex ante* maintenance cost allowance tends to result in inaccurate overall forecasts, and an inefficient allocation of costs between coal systems.

The QCA understands there are a range of factors that can contribute to divergence between forecast and actual scope and cost of ballast undercutting renewals. For example, Aurizon Network has noted that fouling levels, track access, geography, distance from stow location and climatic conditions can all influence the cost of ballast undercutting renewal work that is ultimately delivered.[696]

Table 77 Ballast undercutting renewals (mainline) — percentage of scope achieved against expected scope (km) by system[697]

	2009—10	*2010—11*	*2011—12*	*2012—13*	*2013—14 [a]*	*2014—15*	*2015—16*	*2016—17 [a]*
Newlands	(62)	30	(85)	(63)	(32)	22	(5)	26
Moura	(87)	(62)	(93)	(85)	(43)	127	200	14
Goonyella	47	1	(30)	(19)	47	15	3	(7)
Blackwater	(7)	(2)	(8)	(38)	(81)	10	(13)	(9)
Total	7	(4)	(26)	(34)	(8)	18	1	(3)

Notes: (a) scope figures sourced from Maintenance Costs Reports for 2013–14 and 2016—17.

[696] Aurizon Network, sub. 68: 13–14.
[697] Aurizon Network, Response to QCA request for information, 12 May 2017; Aurizon Network, 2014a; Aurizon Network, 2017f.

Treating ballast undercutting renewal costs as a capital expense means that these costs would be subject to the *ex post* prudency and efficiency assessment and capital expenditure carryover account provisions under Schedule F of the 2017 DAU. Under this approach, Aurizon Network would be permitted to recover its actual ballast undercutting renewal costs through the annual capital expenditure assessment process, to the extent that costs have been incurred efficiently and prudently.

The QCA notes that this approach would remove the uncertainty associated with forecasting ballast undercutting renewal scope and costs, and result in a more efficient overall allowance and allocation of costs between coal systems. This in turn affords the QCA greater scope to approve Aurizon Network's March 2018 submission ballast undercutting renewal costs, both within the maintenance allowances for 2017–18 and 2018–19, and capital indictor for 2019–20 and 2020–21.

Importantly, the QCA considers that applying an *ex post* prudency and efficiency assessment would present Aurizon Network with appropriate incentives to incur efficient costs during the UT5 pricing period.

This *ex post* assessment process will require Aurizon Network to provide sufficient evidence and justification in support of its costs. The QCA recognises that in considering prudency and efficiency, Aurizon Network may contemplate means other than undercutting to ensure the ballast condition is fit for purpose. For example, Aurizon Network may consider preventative measures that work to reduce coal fouling. The QCA expects Aurizon Network will be able to provide transparency in relation to decisions on its ballast practices as part of the *ex post* assessment.

For the case where Aurizon Network choose to adopt alternative ballast practices within the UT5 pricing period, and these costs are not appropriate to capitalise, the QCA will take this into consideration. As such, Aurizon Network should not be deterred from adopting alternative ballast practices in the case that doing so reflects the most prudent and efficient outcome.

QCA conclusion

For the reasons discussed, and having regard to the factors at s. 138(2) of the Act, the QCA has decided that ballast undercutting renewal costs should be transitionally reclassified as capital expenditure for the purposes of determining reference tariffs and allowable revenues during the UT5 pricing period. This reclassification is supported by the characteristics of ballast undercutting renewals and aligns with Aurizon's group capitalisation policy and corresponding statutory accounting treatment.

To give effect to this decision, the QCA has decided to implement a 2-year transitional reclassification period. Specifically, the QCA will continue to expense ballast undercutting renewal costs for 2017–18 and 2018–19 within the maintenance cost allowance, before including these costs in the capital indicator for 2019–20 and 2020–21. The QCA considers this approach is appropriate and provides that this decision does not have 'retrospective' effect. That is, the change in classification of costs will not be backdated to take effect from the commencement of the UT5 pricing period, which has already passed.

Actual ballast undercutting renewal expenditure incurred in 2019–20 and 2020–21 will also be subject to the ex post prudency and efficiency assessment under cl. 2.2, Schedule F of the 2017 DAU, prior to inclusion in the RAB.

The QCA recognises the potential cash flow implications for Aurizon Network of reclassifying these costs. As such, we have applied concessional asset lives of 1 year in 2019–20 and 2 years in 2020–21 for capitalised ballast undercutting renewal costs. The QCA notes that Aurizon

Network has previously indicated that the economic life of new ballast to be between five and seven years.[698] As such, the QCA's concessional depreciation rates represent a conservative transitional approach.

The application of this transitional approach to capitalised ballast undercutting renewal costs in 2019–20 and 2020–21 is discussed further in Chapter 3.

For clarity, the QCA requires ballast undercutting activities classified as 'renewal' activities in Aurizon Network's AMRP to be capitalised only (that is, 'Ballast Undercutting Machine', 'Ballast Undercutting Major' and 'Ballast Undercutting — Complete Turnout'). Ballast undercutting activities that are categorised as 'General Track Maintenance Activities' in the AMRP (that is, 'Ballast Undercutting—Minor' and 'Ballast Undercutting—Turnout Minor') will continue to be expensed and included in the *ex ante* maintenance cost allowance for the UT5 pricing period contained within the 'General track' cost category.[699]

The QCA considers that treating ballast undercutting renewal costs in this manner balances the legitimate business interest of Aurizon Network with the interests of access seekers and access holders. Aurizon Network will be able to recover efficient ballast undercutting renewal expenditure through the *ex post* assessment process and the QCA's transitional approach addresses potential cash flow impacts. This addresses the legitimate business interest of Aurizon Network (s. 138 (2)(b)).

The current approach of expensing ballast undercutting renewal costs creates intertemporal and distributional concerns that are not in the interests of access holders and access seekers (s. 138(2)(e), (h)). This is due to forecasts that are materially different between systems than actual scope, and the fact ballast undercutting renewal activities extend the useful life of the asset. Capitalising ballast undercutting renewal costs should address these issues.

The QCA's approach also advances the object of Part 5 of the Act to promote the economically efficient use of, and investment in the CQCN, with the effect of promoting effective competition in upstream and downstream markets. Importantly, capitalising ballast undercutting renewal costs, and the subsequent application of the ex post prudency and efficiency assessment at Schedule F of the 2017 DAU, provides appropriate incentives to Aurizon Network to reduce costs or otherwise improve productivity, consistent with s. 168(A) (d) of the Act.

The QCA's conclusion on expensed ballast undercutting renewal allowances are set out in Table 78.

Table 78 QCA conclusion on ballast undercutting renewals maintenance expenses for the UT5 pricing period ($m)

Category	*2017–18*	*2018–19*	*2019–20*	*2020–21*
Ballast Undercutting Renewals — Mainline[1]	62.0	62.4	capitalised	capitalised
Ballast Undercutting Renewals — Turnout[2]	4.5	4.4	capitalised	capitalised
Total	66.5	66.8	capitalised	capitalised

Notes: (1) Includes costs for AMRP categories 'Ballast Undercutting Machine' and 'Ballast Undercutting Major'; (2) includes costs for AMRP category 'Ballast Undercutting — Complete Turnout'.

[698] CMT, 2015: 6.
[699] The QCA's decision on General track costs is provided in Table 69.

Ground penetrating radar (GPR)

Aurizon Network has sought funding for two GPR surveys in UT5 at a revised cost of $1.3 million per run.[700]

Aurizon Network has stated that data collected from GPR is critical to the planning and execution of an evidence-based preventative ballast undercutting program.[701] While the QCA agrees that GPR can be used to enhance knowledge of the condition of the ballast, the QCA holds concerns regarding how this information is being used. Aurizon Network has not provided assurances that the most recent GPR data (2016) has been directly used to determine forecast UT5 scope. Rather, the ballast undercutting scope forecast in UT5 is aligned to the UT4 final decision. Furthermore, Aurizon Network has stated the forecast dates and locations applied in its bottom-up cost model were not derived using the 2016 GPR data.[702] In light of these concerns, the QCA considers the provision of costs for one GPR run in UT5 appropriate. On that basis, the QCA has removed Schedule F, cl. 4.3(c)(vi) from the 2017 DAU.

The QCA notes that GPR costs are captured in the ballast undercutting budget and will therefore be capitalised. Taking this into consideration, the QCA accepts Aurizon Network's revised GPR cost of $1.3 million per run, consistent with actual costs for the 2016 GPR run. These costs will be included in the capital indicator and subject to an *ex post* assessment.[703]

8.5.4 Resurfacing

Aurizon Network's revised resurfacing allowance reflected a $4.8 million increase above the 2016–17 base year costs of $83.5 million over the UT5 pricing period, however subsequent advice provided revised resurfacing costs equal to $83.2 million. These costs were derived from Aurizon Network's bottom-up cost model.

Aurizon Network's bottom-up cost model included a number of productivity improvements such as increasing the target rate of production to 1,200m/hr, an average mainline production time of 3.5 hrs per shift, increasing average planned turnout production from 2.5 to 3 turnouts per shift and limiting the use of Aurizon Network's switch tampers when performing mainline work.[704] The bottom-up cost model also included minor revisions to the resurfacing scope for both mainline and turnouts, to reflect higher throughput.[705]

Should the QCA not accept Aurizon Network's bottom-up cost model, Aurizon Network stated that 2016–17 base year costs should be adjusted to reflect an increase in plant maintenance expenditure, forecast over the UT5 pricing period.[706]

The QCA's decision is to adopt Aurizon Network's revised resurfacing costs derived from its bottom-up cost model. This decision recognises the legitimate business interests of Aurizon Network and allows Aurizon Network to recover at least its efficient costs for maintaining the network (s. 138(2)(b) and s. 168A(a)). This is in the interests of access holders and access seekers in that it allows Aurizon Network to provide access to the declared service, to the standard and quality demanded by customers (ss. 138(2)(e) and (h)).

[700] Aurizon Network, sub. 40: 219–222.
[701] Aurizon Network, sub. 40: 219.
[702] Aurizon Network, Response to QCA request for information, 29 June 2018.
[703] The QCA has included the costs for the GPR run in 2019–20. If Aurizon Network choose to perform the GPR run in 2018–19, these cost will be considered under the 2019–20 capex review process.
[704] Aurizon Network, sub. 40: 207–208.
[705] Aurizon Network, sub. 40: 215–216.
[706] Aurizon Network, sub. 40: 214.

Given the productivity concerns raised in the draft decision, the QCA is encouraged by Aurizon Network's decision to review the operating assumptions underpinning its resurfacing model[707] in order to achieve productivity improvements, which has resulted in forecast resurfacing costs below the forecasts derived from a 2016–17 base year, despite the increase in scope to reflect the QCA's decision on volumes.

8.5.5 Rail grinding

Consistent with Aurizon Network's revised maintenance allowance, the QCA has accepted Aurizon Network's 2017 DAU proposed costs for this maintenance category. Aurizon Network stated that its 2017 DAU proposed forecast costs reflect the terms of a new grinding contract that has been negotiated with Aurizon Operations and which commenced on 1 July 2017.

8.5.6 Non-mechanised maintenance activities and traction power

The QCA considers it appropriate to apply 2016–17 actual expenditure as the base year in UT5 for all non-mechanised maintenance activities, with the exception of traction power.

With regard to traction power, Aurizon Network stated that costs have been shifted from traction to signalling for UT5 and this may not be reflected in its 2016–17 figures. In addition, the 2016–17 split between Blackwater and Goonyella electric maintenance is significantly different to Aurizon Network's forecast split for UT5. The QCA has therefore accepted Aurizon Network's 2017 DAU proposed costs for this maintenance category. This is consistent with Aurizon Network's revised maintenance allowance.

The QCA's draft decision applied structure costs consistent with those provided in Aurizon Network's 2017 DAU proposal, noting that the 2016–17 base year was inflated by the one-off impact of Cyclone Debbie. Following the draft decision, Aurizon Network clarified that the increase in the 2016–17 structure costs was not related to the flood recovery effort, and submitted that for structures, applying actual maintenance expenditure in 2016–17 as the base year was appropriate.[708] While Aurizon Network's 2017 DAU proposal forecast a decrease in structure costs from a high in 2017–18, its March 2018 submission forecasts structures expenditure to remain at the higher level throughout UT5.

Aurizon Network's March 2018 submission stated that additional costs were related to Aurizon Network's preventative 'flood readiness' program. However, subsequent information indicated that no specific program existed, rather, additional costs were simply related to preparedness for wet weather. Aurizon Network stated that in recent years the frequency and severity of extreme weather events has had a severe impact on the CQCN and driven a more focussed and robust drain and culvert cleaning program. However, there was no specific business case to address the requirement to maintain effective drainage pathways.[709]

The QCA notes that in addition to structures expenditure included in the maintenance allowance, Aurizon Network intends to undertake significant upgrades to drainage and culverts in UT5 and has included associated costs in the capital indicator. In addition Aurizon Network has recently (2016–17) upgraded 30 life expired culverts.[710] The QCA considers such a renewals

[707] Aurizon Network, sub. 40: 207 — Aurizon Network made these adjustments following review of the draft decision and the QCA's consultant's recommendations in relation to the efficient delivery of rail network maintenance costs.
[708] Aurizon Network, sub. 40: 204–206.
[709] Aurizon Network, Response to QCA request for information, 5 June 2018.
[710] AECOM 2017a: 30.

program would reasonably be expected to improve resilience to flood damage and reduce maintenance requirements.

While the increase in structures expenditure has not been supported through a business case and appears inconsistent with the structure renewals program, it remains unclear whether structure costs in 2016–17 reflected a diversion of costs from another non-mechanised maintenance category for which the 2016–17 base year was applied. On the basis of providing an overall allowance for non-mechanised maintenance that is appropriate, the QCA has taken a conservative approach and will apply 2016–17 actual costs as the base year for structures in UT5. The QCA notes Aurizon Network's actual expenditure in 2017–18 was consistent with the revised structure costs in its March 2018 submission and has accepted Aurizon Network's statements that the level of structures expenditure will remain consistent with 2016–17 throughout the remainder of UT5. The QCA intends to closely monitor structures expenditure over the UT5 pricing period.

This approach promotes economic efficiency (s. 138(2)(a)) and provides incentives for Aurizon Network to further improve productivity as it will retain the reward for any efficiency gains made over the UT5 pricing period (s. 138(2)(b) and s. 168A(d)). The QCA expects this approach will help to reveal efficiencies going forth, which is in the interests of access holders (s. 138(2)(h)) and access seekers (s. 138(2)(e)).

For all other non-mechanised maintenance activities, the QCA considers 2016–17 an appropriate base year as actual costs in 2016–17 provide up-to-date information and reflect Aurizon Network's operating and maintenance service level standards. 2016–17 actual costs also provide direct evidence that some UT4 productivity improvements have already started to flow through to Aurizon Network's bottom-line. Adoption of the 2016–17 base year approach is consistent with Aurizon Network's revised maintenance allowance.

8.5.7 Efficient adjustments to the 2016–17 base year — updated UT5 coal volume forecast

Following selection of a 2016–17 base year cost for all non-mechanised maintenance activities (excluding traction power), the QCA has considered the need for incremental adjustments to costs over the period.

The QCA has increased the general maintenance category to account for the QCA's decision on forecast coal volumes during the UT5 pricing period, consistent with the draft decision. To do this, we increased the proposed allowance for general maintenance by assuming that 50 per cent of costs are variable on a $/gtk basis. [711]

In addition to this adjustment, Aurizon Network submitted that the 2016–17 cost base for general track should be normalised for the labour costs which were diverted from ordinary maintenance activities to flood rectification costs during the response to Cyclone Debbie.[712] The net impact of this change, as estimated by Aurizon Network in its March 2018 submission, was $12.4 million over the UT5 pricing period. However, subsequent advice reduced this estimate to around $7 million (resulting from a $1.613 million ($2016–17) increase to 2016–17 base year costs).[713]

[711] QRC, sub. 53: 31 — QRC supported this approach.
[712] Aurizon Network, sub. 40: 203.
[713] Aurizon Network, Response to QCA request for information, 5 June 2018.

The QCA agrees that the 2016–17 cost base did not include the $1.613 million ($2016–17) of labour that was diverted to flood works during 2016–17 and that this cost should be included in the UT5 cost base.

For this decision the QCA has added back in the flood labour costs and adjusted for increasing volumes by assuming that 50 per cent of costs are variable with volumes changes. This decision recognises the legitimate business interests of Aurizon Network and allows Aurizon Network to recover at least its efficient costs for maintaining the network (s. 138(2)(b) and s. 168A(a)). This is in the interests of access holders and access seekers in that it allows Aurizon Network to provide access to the declared service, to the standard and quality demanded by customers (s. 138(2)(e) and (h)).

8.6 Transition from actual to efficient costs

Throughout the QCA's investigation, a range of inefficiencies were identified.[714] The QCA's preliminary view included a cumulative efficiency factor of 2 per cent per annum from 2018–19 to address inefficiencies captured within the 2016–17 base year costs applied in the draft decision. Stakeholders indicated support for the introduction of the efficiency factor.[715, 716] Aurizon Network did not support the introduction of an efficiency factor, stating that the basis for including an efficiency factor was incorrect,[717] and efficiency improvements are already included within the cost base.[718]

In light of new information, the QCA has revised its approach to Aurizon Network's maintenance allowance and, in this instance, does not consider it appropriate to apply an efficiency factor to forecast costs for the UT5 pricing period.

In making this decision, the QCA has recognised that:

- Our decision requires the capitalisation of renewals expenditure, in particular ballast undercutting renewals. These costs account for 33 per cent of the direct cost allowance. Ballast undercutting renewal costs will be subject to an *ex post* prudency and efficiency review as part of the capital expenditure assessment process and any identified inefficiencies will be addressed through this process.
- Aurizon Network's revised resurfacing costs, derived from its bottom-up cost models encompass a number of productivity improvements, including the adoption of a recommendation by the QCA's consultant GHD.

We do note that regardless of the above factors, there is potential for further efficiency improvements. Aurizon Network itself, has recently stated its commitment to identifying and achieving efficiency improvements. Statements by Aurizon Network indicate plans to address issues that were raised by GHD during the QCA's draft decision process.

[714] Pacific National, sub. 61:6–7 — Pacific National noted that many of the identified inefficiencies were consistent with their own experiences.
[715] Anglo American, sub. 57: 8; Pacific National, sub. 61: 3, 13.
[716] QRC, sub. 53: 31 — QRC noted that in setting the efficiency factor, the QCA did not require Aurizon Network achieve the efficiency target, nor prescribe how Aurizon Network achieve the efficiency target, and that even if one or more of the possible efficiency improvements noted by the QCA is not appropriate to implement, this would not necessarily indicate that the efficiency target is unreasonable.
[717] Aurizon Network, sub. 40: 197, 226–247 — Aurizon Network stated there was a number of instances where the QCA's consultants had misinterpreted information or applied unsubstantiated assumptions.
[718] Aurizon Network, sub. 40: 196–197, 222–223; Aurizon Network, sub. 64: 19.

> … regardless of the UT5 outcome, we are refining our closure strategies bringing fewer closures over longer periods and putting more work into those closures to achieve greater efficiencies. We are restructuring our maintenance teams to ensure planned possessions are utilised most effectively.[719, 720]

Nonetheless, the QCA considers it prudent to provide a transition period to allow Aurizon Network time to implement the initiatives that are required to bring its maintenance allowance to an efficient level.

This approach promotes economic efficiency (s. 138(2)(a)) and provides incentives for Aurizon Network to reduce costs and improve productivity as it will retain the reward for any efficiency gains made over the UT5 pricing period (s. 138(2)(b) and s. 168A(d)). The QCA expects this approach will help to reveal efficiencies going forth, which is in the interests of access holders (s. 138(2)(h)) and access seekers (s. 138(2)(e)).

Maintenance performance and monitoring framework

With regard to a maintenance performance monitoring framework, stakeholders supported greater transparency. The QRC stated that more transparency would increase the likelihood that the network and systems can be optimised for the benefit of all stakeholders, including Aurizon Network.[721] Aurizon Coal did however note that after the fact reporting is of little value in an operational context.[722]

Aurizon Network stated that a detailed reporting framework already exists and any maintenance performance monitoring framework needs to be considered in light of the existing reporting arrangements. Aurizon Network said duplication in reporting was inefficient, especially where there is no identifiable benefit to network users.[723]

The QCA notes that Aurizon Network already reports information on a range of network performance and maintenance costs. In light of this, the QCA has not included a maintenance performance monitoring framework in the 2017 DAU. Rather, the QCA intends to work with Aurizon Network to ensure that the provision of information in future undertakings appropriately demonstrates how changes to the supply chain operations affect maintenance costs (and vice versa), and how Aurizon Network manages associated trade-offs. We expect the recent introduction of the Network Asset Management System (NAMS) will assist with the appropriate provision of information in future undertakings. The QCA considers that this decision appropriately balances the interests of all parties (ss. 138(2)(b), (e) and (h)).

In addition, Aurizon Network has stated it continues to welcome comments from stakeholders on how information is displayed or reported in its current reporting arrangements. We encourage stakeholders and Aurizon Network to work together on these matters.

[719] Glencore, sub. 60: 7 — This approach is also consistent with Glencore's comments stating it 'has, on numerous occasions, discussed maintenance closure strategies with Aurizon Network and encouraged it to adopt less frequent, longer closures to complete maintenance tasks more effectively and as such with less impact upon throughput.'

[720] Aurizon Holdings 2018a: 20.

[721] QRC, sub. 65: 7.

[722] Aurizon Coal, sub. 67: 4.

[723] Aurizon Network, sub. 64: 20–21.

Network performance incentive

In general, while Aurizon Network and stakeholders considered there are opportunities to introduce an incentive mechanism,[724] many noted difficulties in creating a mechanism that achieves the desired outcomes.[725]

Aurizon Network considered it inappropriate to include an incentive mechanism at such a late stage in the regulatory process.[726] The QRC stated that an incentive mechanism may be a matter to be considered in the future and suggested that the QCA should seek proposals on this matter during the term of UT5, conduct a consultation process, and release a discussion paper which sets out its preliminary thinking on incentive mechanisms.[727]

The QCA does not consider the introduction of a network performance incentive appropriate at this time. The QCA acknowledges that incentive mechanism design can be complex and considers that amendments to the 2017 DAU including expanded obligations to minimise disruption to train services and additional reporting obligations provide appropriate means to promote good operational decisions (Chapters 9, 17 and 20). To the extent Aurizon Network and stakeholder's see benefit in the introduction of an incentive mechanism, we encourage parties to collaborate on such matters.

8.7 Non-coal allocation

As foreshadowed in the draft decision, the QCA has considered the appropriateness of applying a non-coal allocation to Aurizon Network's maintenance allowance. Aurizon Network submitted it was opposed to any form of maintenance deduction for non-coal services, claiming maintenance costs attributable to non-coal services are already removed from the proposed maintenance allowance as the proposal was developed with reference to forecast coal volumes only. In addition, non-coal carrying trains result in a materially lower rate of asset degradation and operate across only a small portion of CQCN rail infrastructure.[728]

These claims were supported by Aurizon Bulk, who stated that bulk services are shorter than coal-carrying trains and carry less product per train. The lower gross weight per service and lower product mass per service means less impact on network maintenance.[729]

Aurizon Bulk considered that any shift which leads to extremely large increases in non-coal allocation has the potential to translate into increased costs with unintended consequences. This would be in the form of a shift in the transportation of freight, from rail to road. An increase in heavy vehicle road transport could result in associated economic and community costs. Aurizon Bulk sought the continuation of the arrangements that apply under UT4, particularly as they relate to the allocation of maintenance costs for non-coal services.[730]

The QRC considered it appropriate to allocate costs to non-coal services to avoid both cross-subsidy between coal and non-coal traffic and the over-recovery of costs relative to efficient costs. The QRC suggested non-coal allocation should be based on:

[724] Aurizon Network, sub. 64: 18; QRC, sub. 53: 35; Pacific National, sub. 61: 13; sub. 66: 5; Aurizon Coal, sub. 67: 3.
[725] QRC, sub. 65: 6; Aurizon Coal, sub 67: 3.
[726] Aurizon Network, sub. 64: 18.
[727] QRC, sub. 65: 6, 7.
[728] Aurizon Network, sub. 40: 248; sub. 64: 22.
[729] Aurizon Bulk, sub. 56: 2.
[730] Aurizon Bulk, sub. 56: 2.

- for variable maintenance costs, causal indicators such as non-coal percentage of gtk or train kilometres
- for fixed maintenance costs, the percentage of capacity reserved for non-coal services.[731]

In response to the QCA's request for comments—maintenance allowance and practices paper,[732] the QRC stated the maintenance allowance should relate to the traffic of coal services, not the portion of maintenance costs which is caused by the operation of non-coal services.[733] Pacific National considered gtk a reasonable allocator for non-coal services marginal maintenance costs. Pacific National said that the allocator should not be applied to maintenance tasks specifically related to coal transport.[734]

The QCA considers it appropriate to allocate a portion of maintenance expenditure to non-coal train services, provided this allocation reflects the reasonable effects of non-coal impacts on maintenance. The QCA notes that approved maintenance expenditure for mechanised maintenance activities has been developed with reference to coal traffic only. However, the QCA does not consider our approved maintenance allowance for non-mechanised maintenance activities, based on actual expenditure in 2016–17 accounts for non-coal impacts on maintenance. Therefore, we have estimated the impacts of non-coal traffic on non-mechanised maintenance expenditure,[735] using the non-coal proportion of total system gtk. Our approach is system specific and derived from railing data for 2013–14 to 2016–17.[736]

This approach is consistent with past non-coal allocations for maintenance costs. The QCA considers that this decision appropriately balances the interests of all parties (ss. 138(2)(b), (e) and (h)). This decision recognises Aurizon Network's legitimate business interests and provides Aurizon Network revenue at least enough to meet efficient maintenance costs of providing the coal traffic service, which is the relevant service for reference tariffs stated in the undertaking (s. 168A). This decision also addresses cross-subsidisation between access holders and non-coal train services which is relevant under s. 138(2)(a), (e) and (h). For the purposes of this decision, the QCA has not applied different measures of non-coal traffic to fixed and variable maintenance costs. The QCA suggests that these matters may be considered in future undertaking investigations.

8.8 Indirect costs and related matters

Aurizon Network's 2017 DAU proposal included indirect maintenance costs and depreciation of maintenance assets that accounted for 11 per cent of the total maintenance allowance.

Indirect costs include:

- return on the forecast UT5 maintenance fixed assets[737]

[731] QRC, sub. 53: 32.
[732] QCA 2018b.
[733] QRC, sub. 65: 8.
[734] Pacific National, sub. 66: 6.
[735] Excluding traction power, as the impact of non-coal services on this activity is immaterial.
[736] Aurizon Network, sub. 40: 161 — Aurizon Network stated that the method used to derive an allocation for non-coal services should adjust for maintenance trains, repositioning or transit services and the double counting of cross-system hauls. Aurizon Network, Response to QCA request for information, 5 June 2018 — Aurizon Network provided historical gtk's that accounted for these adjustments.
The QCA has applied historical gtk provided by Aurizon Network which account for these adjustments.
[737] This is referred to as return on plant in Aurizon Network's proposal.

- return on inventory held for maintenance purposes.

While the QCA notes Aurizon Network included depreciation in direct maintenance costs, it is discussed here due to the link with Aurizon Network's fixed maintenance asset register.

8.8.1 Depreciation

Aurizon Network's 2017 DAU proposal did not provide detail on the value of depreciation associated with maintenance assets in its proposal. Although, Aurizon Network noted that depreciation is captured within the proposed direct costs for each maintenance discipline.

In supporting documentation, the QCA identified that Aurizon Network had embedded depreciation in its direct maintenance cost categories.

QCA Analysis

The QCA separately identified Aurizon Network’s forecast depreciation charges that had been included as a direct cost in each maintenance category. By separately identifying the UT5 forecast of depreciation from Aurizon Network's maintenance fixed asset register, the QCA has been able to determine the accuracy of Aurizon Network’s proposed treatment of these costs in its maintenance proposal.

Aurizon Network provided the QCA with its maintenance related fixed asset register from which depreciation charges for each maintenance category could be derived.[738] The QCA identified data discrepancies in the maintenance of the fixed asset register. The QCA and Aurizon Network worked to address these issues.

The QCA has reviewed Aurizon Network's updated UT5 maintenance fixed asset register and was able to confirm:

- Aurizon Network planned to use all of the fixed assets identified in the maintenance asset register
- the commissioning dates for all fixed assets in the maintenance register
- the written-down value of all assets in the maintenance register.

The QCA considers that depreciation costs associated with Aurizon Network’s maintenance-related fixed assets should be calculated using the written-down value in the maintenance register for the UT5 pricing period. As the QCA has been able to confirm the above points, this approach provides a reliable method to derive depreciation costs.

In its March 2018 submission, Aurizon Network provided revised ballast undercutting renewal costs and resurfacing costs, derived from bottom-up cost models. Forecast depreciation costs captured in the ballast undercutting model were lower than depreciation costs derived from the fixed asset register. As the QCA's decision is to adopt costs derived from Aurizon Network's bottom-up cost models (sections 8.5.3and 8.5.4), to ensure consistent treatment, the QCA has not adjusted depreciation to reflect the written down value in the fixed asset register for ballast undercutting renewals and resurfacing. Nonetheless, in future assessments, the QCA would expect that depreciation costs associated with Aurizon Network’s maintenance-related fixed assets should be consistent with the written-down value from the fixed asset register.

[738] Aurizon Network provided a revised fixed asset register in March 2018 to reflect an adjustment to the asset life of the new ballast undercutting machine (RM902) from 15 to 18 years.

The UT4 maintenance allowance applied a CPI escalation to depreciation charges for maintenance assets. The QCA's approach was to encourage Aurizon Network to include its maintenance plant assets into the RAB, rather than by separately accounting for it in the forecast UT5 maintenance allowance.

The QCA previously considered the inclusion of the maintenance plant assets into the RAB would provide greater transparency and accountability regarding Aurizon Network's business decisions to balance the service quality trade-offs between investing in new CQCN infrastructure assets versus increasing expenditure on its CQCN maintenance program.

The QCA acknowledges that the UT4 treatment of depreciation costs for maintenance assets did not have its intended effect. That is, Aurizon Network has not sought approval to include maintenance assets within its RAB, nor achieved greater transparency and accountability with respect to business decisions relating to the procurement of maintenance plant and equipment.[739]

Moreover, the previous approach of escalating depreciation costs by CPI should be netted off in the form of net depreciation (that is, excluding indexation).

Accordingly, the QCA does not consider it appropriate to include CPI escalation in the calculation of depreciation costs associated with the maintenance fixed asset register. The QCA's position is to not approve the CPI escalation that has been included in Aurizon Network's forecast UT5 depreciation cost claim. This is in the interest of access holders and access seekers (s. 138(2)(e) and (h)) and promotes the economically efficient operation of, use of and investment in the network (s. 138(2)(a)).

The QCA notes that the direct maintenance costs in Aurizon Network's March 2018 submission have been calculated in a manner that inadvertently escalates a portion of depreciation (depreciation captured in base year costs and bottom-up cost models) by the MCI. While the QCA considers that the MCI should not apply to depreciation, on balance, noting Aurizon Network has applied lower depreciation charges for ballast undercutting renewals than those derived from the fixed asset register and the immaterial impact on the overall maintenance allowance, the QCA's decision to adopt Aurizon Network's revised direct maintenance costs as provided in the March 2018 submission remains.

The QCA considers that overall, our decision on depreciation balances Aurizon Network's legitimate business interests (s. 138(2)(b)) with the interests of access holders and access seekers (s. 138(2)(e) and (h)). The QCA's decision allows Aurizon Network to generate revenue that is at least enough to meet efficient costs (s. 168A(a)). The QCA considers that the approach provides a reliable method to derive depreciation costs.

8.8.2 Asset Optimisation

In making this decision, the QCA has not optimised any excess capacity arising from Aurizon Network's investment in new maintenance fleet. Given the large and lumpy nature of these assets, the QCA did not consider it appropriate to determine whether it reflected the optimal configuration required for Aurizon Network's maintenance needs. Rather, the QCA has taken a conservative approach at this time. The extent of this issue will be monitored.[740]

[739] QRC, sub. 53: 32 —QRC preferred major maintenance assets to be included in the RAB so that the processes for acceptance of capital expenditure can be applied. The QCA proposes to consider this issue further in future undertakings.

[740] QRC, sub. 53: 32 —QRC accepted this position.

8.8.3 Return on Assets

Aurizon Network's 2017 DAU proposal included a return on the fixed maintenance asset register which increased over the UT5 pricing period from a 2017–18 forecast of $6.8 million in nominal dollars to $9.6 million in 2019–20 nominal dollars.

Aurizon Network defined its proposed return on its maintenance related fixed assets as efficient because it was calculated based on the:

- written down value of Aurizon Network's maintenance related assets
- procurement of a new fleet of undercutting and resurfacing track machines
- application of a proposed pre-tax real WACC of 6.7 per cent.

Aurizon Network's March 2018 submission revised its forecast return on the fixed asset register to reflect a post-tax WACC of 7.03 per cent.

QCA Analysis

The QCA has determined that the rate of return to apply to the Aurizon Network's maintenance fixed asset register should be consistent with the QCA's decision on the post-tax nominal WACC. This decision was made on the basis that no tax is paid on the return earned, as it is treated as a tax deductible cost in the allowable revenue calculation.

The QCA considers that the appropriate post-tax nominal WACC to apply is 5.7 per cent. This rate of return has been applied to the written-down value of the asset in each year.

Table 79 Maintenance-related return on asset charges ($m)

Asset type	*2017/18*	*2018/19*	*2019/20*	*2020/21*
Ballast undercutting renewals	3.7	4.3	5.8	5.3
Resurfacing	3.7	3.4	3.2	2.9
Other	0.7	0.8	1.0	1.1
Total	8.1	8.6	9.9	9.3

Note: Return on assets attributed to ballast undercutting renewals will be capitalised in 2019–20 and 2020–21.

8.8.4 Return on maintenance inventory

Aurizon Network embedded a return on inventory cost proposal in the forecast UT5 maintenance allowance in recognition that it must invest, procure and store an appropriate level of maintenance inventory to deliver its UT5 maintenance program in an effective and efficient manner.

Aurizon Network's 2017 DAU proposal forecast the return on inventory in 2017–18 to be $1.7 million in nominal dollars, reducing to $1.5 million nominal dollars in 2019–20 and 2020–21.[741] In determining its proposed return on inventory, Aurizon Network:

- applied a real pre-tax WACC of 6.7 per cent
- determined the level of inventory at Aurizon's mixed depots and held for maintenance purposes.[742]

[741] Aurizon Network, sub. 1: 191.

Aurizon Network identified that its proposed return on inventory cost claim was efficient because it was lower than the equivalent 2016–17 cost (in nominal dollars) that was approved in the UT4 maintenance allowance.

Aurizon Network's March 2018 submission provided a revised return of inventory forecast based on the assumption that 37 per cent of total inventory holdings are for maintenance activities and applied a post-tax nominal WACC of 7.03 per cent.

QCA analysis

The QCA considers that maintaining a level of inventory is necessary and should allow Aurizon Network to procure goods at least cost. We have rejected Aurizon Network's proposed return on inventory on the basis that:

- the allowance included asset and inventory management costs which were not justified in its 2017 DAU proposal
- a pre-tax nominal WACC rather than a post-tax nominal WACC was utilised.

Aurizon Network highlighted that a portion of its inventory is obsolete,[743] but did not detail why its targeted inventory levels (inclusive of obsolete inventory) should be considered efficient and provided insufficient justification for the proportion of its inventory that is maintenance related.

In its March 2018 submission, Aurizon Network provided a revised inventory consumption rate for maintenance activities, derived from the 2016–17 average monthly inventory split between maintenance and other activities (such as capital).

The actual inventory consumption rate for maintenance activities in 2016–17 reflects up-to-date information and the QCA considers this a reasonable forecast for UT5. This approach is also consistent with the 2016–17 base year approach applied to forecast direct maintenance costs for non-mechanised maintenance activities.[744]

The QCA's decision on the return on inventory applies a maintenance inventory consumption rate of 37 per cent and the QCA's post tax nominal WACC of 5.7 per cent. Table 80 details the return on maintenance related inventory.

Table 80 Return on Maintenance Inventory ($m)

Asset type	*2017/18*	*2018/19*	*2019/20*	*2020/21*
Inventory	1.0	0.9	0.9	0.9

8.9 Maintenance cost index

Aurizon Network's maintenance cost index (MCI) is a composite index used to escalate its approved maintenance allowance. Introduced in 2010, the MCI was proposed and approved following a period during which unit maintenance costs were increasing at a faster rate than the consumer price index (CPI). Compared to CPI, the MCI provides a better reflection of Aurizon

742 In the information gathering process, Aurizon Network provided detailed information on the maintenance inventory held in the mixed depots and spreadsheets detailing the 2014–15 actual mix of labour hours booked to inventory cost items.
743 Aurizon Network, Response to QCA request for information, 12 May 2017.
744 Excluding traction power.

Network's underlying cost drivers for the range of materials and resources required in completing maintenance work.[745]

The first step in calculating the MCI is to determine the key costs required in performing Aurizon Network's maintenance activities. These costs are then categorised and assigned related sub-indices, which are forecast for the undertaking period. Cost categories are assigned weightings to reflect their relative contribution to maintenance expenditure. By applying these weightings, the composite index is calculated.

8.9.1 Aurizon Network's 2017 DAU proposal

Aurizon Network proposed to use the MCI to escalate certain costs elements of its UT5 maintenance cost proposal, including the forecast base unit rates ($2014–15) for all direct maintenance costs[746] and the various categories of its self-insurance claim. Aurizon Network's proposed annual MCI rates are shown in Table 81 below. Aurizon Network stated that the methodology used to construct its proposed MCI was consistent with the QCA's UT4 final decision.[747]

Table 81 Aurizon Network's 2017 DAU proposed annual MCI rates

Year	*Annual MCI rates (as per 2017 DAU submission)*
2017–18	1.82%
2018–19	1.91%
2019–20	1.92%
2020–21	1.93%

Source: Aurizon Network, sub. 1: 164.

Aurizon Network proposed to align the annual growth rate of labour sub-indices to the wage price index (WPI) and use CPI to estimate annual growth of consumables, fuel, accommodation, and CPI sub-indices.

Table 82 outlines the components required for calculation of the MCI.

Table 82 Aurizon Network's 2017 DAU proposed construction of the MCI

Cost category	*Weighting*	*Sub-index*	*Sub-index weightings*	*Forecast rates*
Labour	33.4%	ABS Wage Price Index: National Construction (A2705076L)	33.3%	WPI: Qld Treasury and Trade MYFER 2015–16
		ABS Wage Price Index: National Mining (A2705060V)	33.3%	WPI: Qld Treasury and Trade MYFER 2015–16
		ABS Wage Price Index: Queensland, all industries (A2704548F)	33.3%	WPI: Qld Treasury and Trade MYFER 2015–16

745 QCA 2009: 182.
746 Aurizon Network, sub. 1: 165 — The MCI is to apply to all cost categories within each maintenance activity, excluding depreciation.
747 Aurizon Network, sub. 1: 164.

Cost category	Weighting	Sub-index	Sub-index weightings	Forecast rates
Consumables	54.6%	ABS Producer Price Index: Fabricated metal (A2305805K)	34.8%	Proposed forecast rate of inflation: 1.22%
		ABS Producer Price Index: Transport Equipment & Parts (A2305907X)	19.6%	Proposed forecast rate of inflation: 1.22%
		ABS Producer Price Index: Mining/Construction Machinery Manufacturing (A2307785X)	45.6%	Proposed forecast rate of inflation: 1.22%
Fuel	1.4%	AIP: Diesel Terminal Gate Prices, Brisbane (aip.com.au/pricing/tgp.htm)	100%	Proposed forecast rate of inflation: 1.22%
Accommodation	3.1%	ABS Producer Price Index: Accommodation (A4406608F)	100%	Proposed forecast rate of inflation: 1.22%
CPI	7.4%	ABS Consumer Price Index: All groups, Brisbane (A2325816R)	100%	Proposed forecast rate of inflation: 1.22%

Note: Aurizon Network updated MCI weightings for fuel and accommodation in May 2017 to account for a calculation error in its 2017 DAU proposal.

Source: Aurizon Network, sub. 1: 164.

As part of the annual revenue cap process, the MCI is adjusted to account for differentials between actual and forecast inflation pressure.[748] The approved weightings and sub-indices, however, remain fixed over the regulatory period.

Aurizon Network proposed to annually report the actual MCI and the approved forecast MCI for each year.[749]

[748] See Schedule F, cls. 4.3(c)(i) and 4.4(a)(ii) of the 2017 DAU.
[749] See cl. 10.3.3(c)(iv) of the 2017 DAU.

8.9.2 QCA analysis and decision

Summary of decision 8.2

- **The QCA considers the appropriate way for Aurizon Network to amend its 2017 DAU is to revise its proposed allowable revenues and reference tariffs to reflect the following annual MCI rates:**
  - **(a) 2017–18 - 1.81 per cent**
  - **(b) 2018–19 - 1.91 per cent**
  - **(c) 2019–20 - 1.92 per cent**
  - **(d) 2020–21 - 1.92 per cent.**
- **For *ex post* reconciliation of forecast MCI to actual MCI, the QCA requires Aurizon Network to amend the weightings to reflect Table 85**.
- **The QCA considers that the *ex post* reconciliation of forecast to actual inflation (Schedule F, cls. 4.3(c)(i) and 4.4(a)(ii)), insulates Aurizon Network from cost escalation within its maintenance cost forecasts.**

The purpose of the MCI is to provide a reasonable estimate of the inflationary pressures Aurizon Network's maintenance costs will experience during the 2017 DAU period. If this is not achieved, the MCI cannot be considered appropriate. In assessing whether Aurizon Network's proposed MCI is appropriate, amongst other things, we have assessed the following:

- the proposed annual MCI rates
- construction of the proposed MCI.

By separating the analysis of the proposed annual MCI rates from the construction of the MCI, we have considered the proposed MCI against actual movements in the escalation of maintenance costs. This allows for an informed decision when determining the appropriateness of Aurizon Network's proposed MCI.

8.9.3 Stakeholder submissions

The QRC did not consider the MCI an appropriate methodology for measuring the change in maintenance costs, because it may no longer properly reflect changes in real terms of Aurizon Network's cost base.[750]

The QRC also noted Aurizon Network's substantial escalation based on inflation appeared:[751]

- contrary to the experiences of QRC members who have experienced dropping or stable construction or maintenance costs
- contrary to Aurizon Network's claims about its productivity initiatives (including actual costs of labour reducing, when labour costs are supposed to represent 33 per cent of the MCI)
- not appropriate for cost categories which would not be anticipated to have any close connection or correlation to the MCI (this includes GPR costs, traction power, telecommunications and other direct miscellaneous costs)
- contrary to regulatory precedent as MCI was not approved on the basis that it would be applied across regulatory periods.[752]

[750] QRC, sub. 21: 46.
[751] QRC, sub. 21: 42, 44, 45.

8.9.4 Proposed annual MCI rate

Since submitting the 2017 DAU, actual sub-index values have become available for 2016–17. This removes the need to forecast these numbers in determining the MCI for the UT5 pricing period. Updating Aurizon Network's proposed MCI to reflect actual 2016–17 sub-indices leads to a slight change in in the proposed annual MCI rates, as is demonstrated in Table 83 below.[753]

In addition, Aurizon Network's March 2018 submission, provided revised annual MCI rates to reflect updated forecasts of WPI and CPI, as well as weightings reflecting its revised direct maintenance costs. This is also reflected in Table 83.

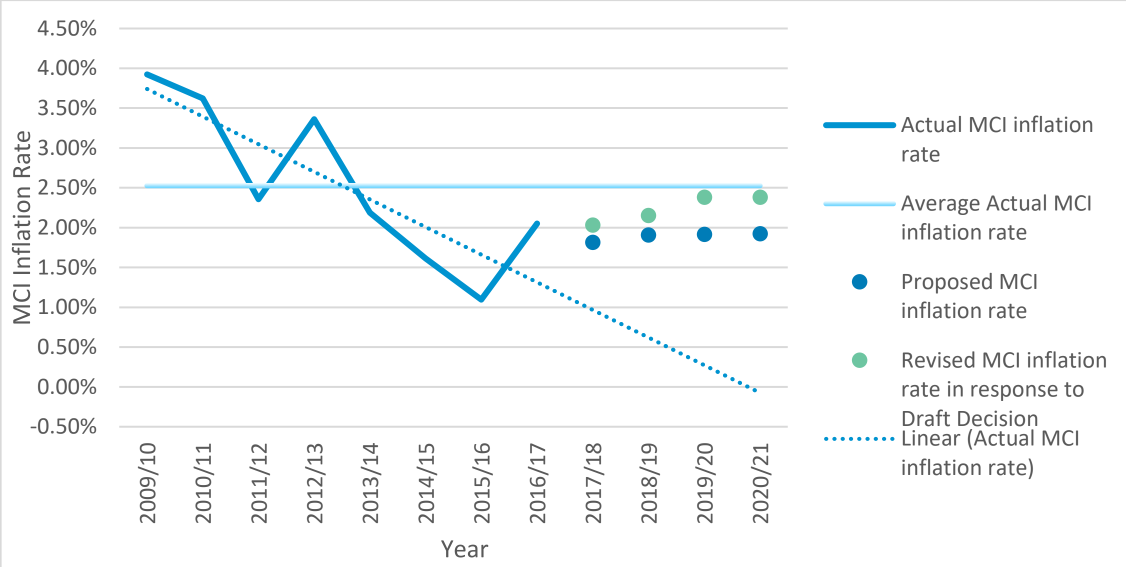
Table 83 Aurizon Network's revised annual MCI rates

Year	*2017 DAU proposed annual MCI rates (updated for 2016–17 actual index values)*	*March 2018 submission annual MCI rates*
2017–18	1.81%	2.03%
2018–19	1.91%	2.15%
2019–20	1.92%	2.38%
2020–21	1.92%	2.38%

Source: Aurizon Network, sub 40: 257.

As the MCI was introduced in 2009–10, historical movements in the actual MCI can be tracked over the past seven years. The QCA considers that analysis of movements in the actual MCI can provide insight into the appropriateness of Aurizon Network's proposed annual MCI rates. We have compared the annual MCI rates proposed in Aurizon Network's 2017 DAU (updated for 2016–17 actual index values) and its March 2018 annual MCI rates, against actual MCI rates from 2009–10 to 2016–17. This shows how Aurizon Network's proposed escalation compares with inflationary pressures on maintenance costs in the past.

[752] QRC, sub. 21: 43.
[753] The QCA notes that actual sub-index values for 2017–18 are now also available. The QCA has not updated Aurizon Network's proposed MCI rates to reflect 2017–18 actuals. The QCA considers it appropriate that *ex-post* reconciliation between forecasts and actuals for the UT5 pricing period occur through the annual revenue cap process (Schedule F, cls. 4.3(c)(i) and 4.4(a)(ii)), applying weightings consistent with the QCA's approved MCI weightings.



Source: QCA analysis.

While the actual MCI increased from 1.10 per cent in 2015–16 to 2.05 per cent in 2016–17, overall, there has been a downward trend in the actual MCI. While extrapolating a simple linear trend with a small number of observations may reflect only part of an expected cyclical pattern over time, it provides a reasonable basis to forecast a lower bound for the annual MCI, in the absence of detailed independent forecasts of expected escalation of maintenance costs.

The average of the actual MCI over the history of the index is 2.53 per cent. There is no information available at this time to suggest the MCI will increase considerably beyond this level over the UT5 pricing period.

While both the 2017 DAU proposed annual MCI rates (updated for 2016–17 actuals) and the revised MCI rates provided in the March 2018 submission are within the bounds of the historical average and trend, the QCA considers that the annual MCI rates as proposed in the 2017 DAU submission provide a more balanced reflection of both average and trend.

Even though analysis of historical movements in the actual MCI provides only guidance on future outcomes, the annual MCI rates proposed in the 2017 DAU (updated for 2016–17 actuals) appear appropriate. The QCA expects these values will minimise the variance between forecast and observed inflation.

8.9.5 Construction of the proposed MCI

The QCA considers that for the MCI to remain an appropriate methodology for measuring change in Aurizon Network's maintenance costs, it must be constructed as follows:

- Sub-indices should provide a reasonable reflection of the inputs required to perform Aurizon Network's maintenance activities.
- Weightings should represent the cost composition of approved maintenance expenditure.
- Forecasting methods should provide a reasonable estimation of sub-index growth.

Adjustments to the MCI as part of the annual revenue cap process will account for differences between actual and forecasted sub-index growth. While this places less importance on the accuracy of the forecasting method, the QCA is mindful of the cash-flow implications for Aurizon Network and price stability for access holders and has therefore given attention to the best forecast method available.

Sub-Indices

The QCA considers that the MCI should have a strong correlation with Aurizon Network's maintenance costs to ensure the index rises and falls in line with the costs faced by Aurizon Network. In order to achieve this, sub-indices should reflect the inputs required to perform Aurizon Network's maintenance activities. The choice of sub-indices remains fixed over the regulatory period.

Aurizon Network proposed sub-indices which are consistent with those approved in UT4. The QCA does not consider that the inputs required to perform Aurizon Network's maintenance activities have varied significantly since UT4 and therefore consider the proposed sub-indices appropriate.[754] The QCA notes the QRC's concerns regarding correlation of the MCI with maintenance costs. It is unlikely that the method of applying sub-indices can completely reflect the set of inputs required to perform the wide array of maintenance activities undertaken by Aurizon Network, but the proposed sub-indices should provide a reasonable reflection of Aurizon Network's cost base.

Cost category weightings

Cost category weightings are a key component of the MCI. As the MCI is a composite index, weightings are applied to reflect the relative contribution of different cost categories to Aurizon Network's maintenance expenditure. MCI weightings will remain fixed over the regulatory period.

The MCI should apply weightings consistent with the composition of approved maintenance expenditure. The QCA has updated the MCI weightings to reflect our decision on Aurizon Network's maintenance allowance.[755]

Additional concerns on Aurizon Network's proposed weightings are addressed below.

Determination of consumable sub-index weightings

Weightings assigned to consumable sub-indices (heavy plant and equipment; track components; and transportation equipment and parts) should reflect the split of consumable costs approved in UT5.

Aurizon Network provided the breakdown of consumable costs, split into the relevant sub-indices for the UT4 regulatory period, and stated that this was appropriate to apply in UT5, given they were based on actual costs booked to Aurizon Network's accounting system.[756]

The QCA considers it appropriate to apply consumable sub-index weightings consistent with the actual split in 2016–17 provided by Aurizon Network.[757] This reflects recently available information and is consistent with the 2016–17 base year approach applied to forecast direct maintenance costs for non-mechanised maintenance activities.[758]

[754] With the addition of CPI as a sub-index under the consumables cost category. This is discussed in detail under the heading 'Use of depreciation costs to determine CPI cost category weighting' below.

[755] Applying weightings consistent with Aurizon Network's approved maintenance expenditure will capture the productivity and cost saving initiatives included in the approved allowance, addressing the QRC's concerns that substantial escalation based on inflation appears contrary to Aurizon Network's claims about its productivity and cost saving initiatives.

[756] Aurizon Network, Response to QCA request for information, 5 June 2017.

[757] Aurizon Network, Response to QCA request for information, 5 June 2018.

[758] Excluding traction power.

Allocation of rail grinding costs between cost categories

For the purpose of calculating MCI weightings, Aurizon Network proposed to allocate total rail grinding costs to the consumables cost category.[759] Aurizon Network stated that because rail grinding is provided by an external provider, Aurizon Network is not subject to fluctuations in categories such as labour and fuel, as it does not employ staff or own the equipment required to perform this activity.[760] The QCA does not consider that Aurizon Network is exempt from fluctuations in these costs; instead, these fluctuations would be passed on through the contract with the external provider.

The QCA considers it appropriate to determine the cost category weightings by allocating rail grinding costs amongst cost categories, with reference to the forecast composition of rail grinding costs over UT5 provided through the request for information process.[761]

Use of depreciation costs to determine CPI cost category weighting

Aurizon Network's proposed MCI used depreciation costs to determine the weighting assigned to the CPI cost category. The QCA notes that the MCI is not applied to depreciation;[762] therefore, it is not appropriate for depreciation costs to be included in the MCI calculation.

In the approved UT4 approach, the weighting assigned to the CPI cost category was based on a balance of costs, including office-related costs, utility charges, other hire costs, freight charges, safety equipment including personal protective equipment (PPE), security, license fees, and more. While these costs have not been isolated in UT5, information provided in support of Aurizon Network's March 2018 submission indicated CPI costs are captured under consumables.[763] On this basis, the QCA considers it appropriate to remove the CPI cost category from the MCI and include CPI as a sub-index under the consumables cost category. The weighting assigned to the CPI sub-index will be based on the actual sub-index split in 2016–17. This approach is consistent with the approach applied to determine other consumable sub-index weightings, as described above.

Forecast approach

Aurizon Network's proposed MCI applied forecast escalation rates to each sub-index to estimate index values for the years 2016–17 to 2020–21.[764]

The MCI rates proposed in Aurizon Network's 2017 DAU applied WPI forecasts from the Queensland Government to labour sub-indices. Aurizon Network's proposed CPI inflation rate was applied to consumables, accommodation, fuel and CPI sub-indices. [765]

[759] Aurizon Network's revised MCI in its March 2018 submission also allocated total rail grinding costs to the consumables cost category.
[760] Aurizon Network, Response to QCA request for information, 5 June 2017.
[761] Aurizon Network, Response to QCA request for information, 29 May 2017.
[762] Escalation of depreciation costs is discussed in section 8.8.1.
[763] Aurizon Network, Response to QCA request for information, 5 June 2018.
[764] While Aurizon Network's proposed MCI required forecast escalation rates for 2016–17, actual sub-index values have since become available. The QCA has updated Aurizon Network's proposed annual MCI rates for 2016–17 actuals. In addition, the QCA notes that actual sub-index values for 2017–18 are now also available. The QCA has not updated Aurizon Network's proposed MCI rates to reflect 2017–18 actuals. It considers it appropriate that *ex-post* reconciliation between forecast and actuals for the UT5 pricing period occur through the annual revenue cap process (Schedule F, cls. 4.3(c)(i) and 4.4(a)(ii)), applying weightings consistent with the QCA's approved MCI weightings.

In its March 2018 submission, Aurizon Network submitted that MCI rates should be internally consistent with the forecasts of WPI and CPI, but did not provide evidence to support the use of these forecasts.

The annual revenue cap process adjusts revenues to account for differentials between actual and forecasted MCI. Therefore the QCA's role is to set escalation rates that best match expected cash-flows to the expected escalation in costs over the regulatory period. Doing so minimises cash-flow variations for Aurizon Network and price instability for its customers. For this reason, the QCA considers Aurizon Network's proposed forecast escalation rates of WPI and CPI for maintenance costs not appropriate.

The WPI forecast from the Queensland Government is a forecast of state-wide, all-industries wage price inflation. The MCI however, is designed to reflect changes in the costs of specific classes of specialised labour such as construction and mining. In this regard, the QCA does not consider the Queensland Government's WPI forecasts the best estimate of labour cost escalation for the purposes of the MCI.

While forecast CPI is a widely accepted proxy to estimate movements in general prices, Aurizon Network's proposal applies forecast CPI to specific costs such as consumables, fuel, travel and accommodation. The MCI should provide a better reflection than CPI of the movements in maintenance costs over time. The QCA does not consider that forecast CPI will provide an appropriate estimate of movements in these specific maintenance prices.

The MCI rates should reflect the expected movements in maintenance specific prices. In the absence of detailed independent forecasts of the expected escalation of each sub-index, the QCA considers analysis of historical movements in the actual MCI provides an appropriate forecasting approach.

8.9.6 Summary analysis

The QCA's decision is that it is appropriate to apply annual MCI rates equivalent to the rates proposed in Aurizon Network's 2017 DAU proposal, updated for 2016–17 actuals (Table 84). These rates appear reasonable in the context of historical movements in the actual MCI and provide a more balanced reflection of the historical MCI average and trend than Aurizon Network's revised MCI rates submitted in March 2018. The QCA considers the annual MCI rates proposed in Aurizon Network's 2017 DAU should minimise the variance between actual and forecast indexation for maintenance expenditure in UT5. In any case, adjustments to account for differences between actual and forecasted MCI is to continue as part of the annual revenue cap process. This adjustment is to be applied only to maintenance costs escalated using the MCI.

While the QCA accepts Aurizon Network's proposed annual MCI rates (updated for 2016–17 actuals), we do not accept the underlying methodology applied to construct the MCI. For clarity, in accepting Aurizon Network's 2017 DAU proposed annual MCI rates, we accept the MCI based on our analysis of historical movements in the MCI, not the methodology applied to construct the annual MCI rates (i.e. Aurizon Network's proposed weightings and application of CPI and WPI forecasts to derive the annual MCI).

[765] Aurizon Network, sub. 40:256 — Aurizon Network's March 2018 submission applied a forecasting approach consistent with its 2017 DAU proposal, however updated the forecast rates to reflect revised forecasts of WPI (consistent with Qld Government forecasts) and CPI (consistent with forecasts in its March 2018 submission).

The QCA recognises the need to determine appropriate sub-indices and weights for the *ex-post* reconciliation process that occurs under Schedule F, cls. 4.3(c)(i) and 4.4(a)(ii) of the 2017 DAU. Doing so allows Aurizon Network to be appropriately compensated for actual inflation experienced throughout the UT5 pricing period. On this basis, the QCA requires actual MCI rates calculated as part of the *ex post* reconciliation process to be based on the MCI weightings set out in **Table 85**.[766] The QCA considers these weightings provide an appropriate reflection of the composition of Aurizon Network's maintenance expenditure over UT5.

The QCA considers this is appropriate having regard to the factors under s. 138(2) of the QCA Act, including appropriately balancing the legitimate business interests of Aurizon Network, with the interests of access seekers and access holders (ss. 138(2)(b),(e),(h)). This approach has addressed stakeholder concerns regarding excessive escalation of maintenance expenditure due to inflation, and should allow Aurizon Network to generate revenue that is at least enough to meet the efficient costs of providing access to the service (s. 138(2)(g)).

Table 84 Approved annual MCI rates

Year	*QCA decision — MCI annual rates*
2017–18	1.81%
2018–19	1.91%
FY2020	1.92%
2020–21	1.92%

Table 85 Amended construction of the MCI

<table>
<tr><th>Cost category</th><th>Weighting</th><th>Sub-Index</th><th>Sub-Index weighting</th></tr>
<tr><td rowspan="3">Labour</td><td rowspan="3">52.3%</td><td>WPI; Construction; National</td><td>33.3%</td></tr>
<tr><td>WPI: Mining; National</td><td>33.3%</td></tr>
<tr><td>WPI: Queensland</td><td>33.3%</td></tr>
<tr><td rowspan="4">Consumables</td><td rowspan="4">43.2%</td><td>Fabricated Metal PPI</td><td>14.4%</td></tr>
<tr><td>Transport, Equipment and Parts PPI</td><td>14.9%</td></tr>
<tr><td>Mining Construction and Machinery Manufacturing PPI</td><td>51.7%</td></tr>
<tr><td>CPI</td><td>19.0%</td></tr>
<tr><td>Fuel</td><td>2.1%</td><td>AIP TPG Diesel; Brisbane</td><td>100%</td></tr>
<tr><td>Accommodation</td><td>2.4%</td><td>Accommodation and Food Services PPI</td><td>100%</td></tr>
</table>

Source: QCA analysis. Note: due to rounding the sum of weightings may not equal 100%. Note: Refer to Annexure 1 (UT5 allowable revenue inputs - Excel Format) for the QCA's decision weightings.

[766] QRC, sub. 53: 32–33 — The QRC supported the approach of adopting the proposed MCI rates, on the basis that the revenue cap process will adjust for differentials between forecast and actual rates, where actual rates will be calculated using the amended construction of the MCI.

9 SCHEDULE F - REFERENCE TARIFFS AND TAKE-OR-PAY

9.1 Aurizon Network's 2017 DAU proposal

Schedule F of Aurizon Network's 2017 DAU sets out reference tariffs and related revenue-cap arrangements for the calculation and recovery of Aurizon Network's allowable revenue for coal-carrying train services. It also defines the characteristics of reference train services[767] to which reference tariffs and the application of certain take-or-pay arrangements apply.

Aurizon Network's 2017 DAU framework consists of provisions related to:

- defining the reference train service for the purposes of a reference tariff (cls. 1.3, 7–11)[768]
- the structure and calculation of a reference tariff (cls. 2, 7–11)
- take-or-pay arrangements (cl. 3)
- reviews of, and variations to, reference tariffs, including adjustments in relation to Aurizon Network's allowable revenue (cls. 4–6).

Key issues identified during the QCA's investigation

The QCA has considered all elements of Schedule F of Aurizon Network's 2017 DAU proposal in making this decision. The following issues attracted comment from stakeholders, or have been identified for further consideration:

- the determination of reference tariffs (section 9.2)
- processes for the review and variation of reference tariffs, including treatment of access facilitation rebates, electric energy charges (EC component of reference tariffs) and the review event mechanism (section 9.3)
- take or pay arrangements, including differences in take or pay treatment between different generations of access agreements, as well as related pooling and deeming mechanisms (section 9.4)
- price of access to the overhead power systems (section 9.5)
- volume forecasts (section 9.6)
- Aurizon Network's reference tariff proposal (section 9.7).

9.2 Determination of reference tariffs

Aurizon Network's proposal

Aurizon Network's 2017 DAU has proposed reference tariffs for coal-carrying train services, based on a reference train service (cl. 1.2). The reference train service is a notional train service defined by a set of characteristics under cl. 1.3, which include carrying only bulk coal, meeting specified operational characteristics (such as complying with applicable rollingstock interface standards) and operating in accordance with an access agreement on substantially the same

[767] This includes the system operational characteristics and parameters for a reference train service.
[768] In this chapter, clause numbers refer to the clauses within Schedule F of Aurizon Network's 2017 DAU (unless otherwise indicated).

terms as a standard access agreement. In addition to these general reference train service characteristics, there are also further system-specific reference train service criteria for reference tariffs.[769] These include system-specific operational characteristics, such as maximum train lengths, and nominated loading and unloading facilities and times within each system.

A reference tariff will apply to a train service that is consistent with the characteristics of the relevant reference train service, in which case access charges will be calculated in accordance with the reference tariff.[770]

A reference tariff is made up of the following components (cl. 2.2):

- AT_1—the incremental maintenance tariff, levied on a gross tonne kilometre (gtk) basis
- AT_2—the incremental capacity tariff, levied on a reference train path (rtp) basis
- AT_3—an allocative tariff, levied on a net tonne kilometre (ntk) basis
- AT_4—an allocative tariff, levied on a net tonne (nt) basis
- AT_5—the electric access tariff, levied on an electric gross tonne kilometre (egtk) basis
- other components—the EC component (which is the electric energy charge, levied on an egtk basis); the QCA levy (the fees imposed by the QCA on beneficiaries of its regulatory services, levied on a net tonne basis); and any applicable adjustment charges (see section 9.3 for further details on adjustment charges).

Aurizon Network's 2017 DAU specifies the inputs for these tariff components for each coal system and, where applicable, the calculated premium/discount,[771] as well as the system gtk forecasts and allowable revenues.[772] The 2017 DAU indicates these are to be updated upon the QCA's approval of the 2015–16 revenue cap. There are also specific provisions to determine how to calculate each tariff component for cross-system train services (cl. 2.3).

The 2017 DAU also includes monthly system gtk forecasts for the Blackwater and Newlands Systems, as access agreements executed or renewed during the term of the 2001 Undertaking (the UT1 period) rely on such forecasts.[773]

[769] See the following clauses: Blackwater System, cl. 7.1; the Goonyella System, cl. 8.1; the Moura System, cl. 9.1; the Newlands System, cl. 10.1; the Goonyella to Abbot Point System, cl. 11.1.

[770] See Chapter 15 – Pricing principles for further details on circumstances where price differentiation may occur.

[771] A premium/discount is the addition/reduction applied on a $/ntk basis when revenue from the application of a system reference tariff is required to be adjusted for certain train services.

[772] See the following clauses: the Blackwater System reference tariffs, cls. 7.2–7.3; the Goonyella System reference tariffs, cls. 8.2–8.3; the Moura System reference tariffs, cls. 9.2–9.3; the Newlands System reference tariffs, cls. 10.2–10.3; the Goonyella to Abbot Point System reference tariffs, cls. 11.2–11.3.

[773] Clause 12 accounts for the circumstance where access rights under an Access Agreement (old access agreement) are transferred to another Access Agreement (new access agreement).

QCA analysis and decision

Summary of decision 9.1

- **The QCA's decision is that Aurizon Network's 2017 DAU proposals in respect of system reference tariff provisions be amended.**
- **The QCA's required amendments are provided in the Amended 2017 DAU at Appendix H.**

The QCA notes that Aurizon Network has included transitional provisions for monthly system forecasts for the Blackwater and Newlands Systems, as there are no longer any UT1 Access Agreements in the Goonyella or Moura Systems to which these transitional provisions apply.[774] We have not been informed of any renewals or extensions of those access agreements, so we consider it appropriate to approve Aurizon Network's proposal. The QCA accepts that transitional provisions are only required to specify a monthly system gtk forecast where access agreements executed or renewed during the term of the 2001 Access Undertaking (UT1) are in operation (see cl. 12).

Since its submission of the 2017 DAU, Aurizon Network has proposed a number of amendments to the system-specific reference train service criteria and reference tariff inputs, including the nominal train payload used to calculate tariff inputs.[775] Table 86 sets out the changes proposed by Aurizon Network.

Table 86 Aurizon Network's proposed changes to System Reference Tariff clauses

System	*Changes to maximum comparative length of a train*	*Changes to nominated loading and/or unloading facilities*	*Changes to nominal train payload*
Blackwater	Increased from 1,709 to 1,716 metres. Removed specific maximum of 1,240 metres for trains operating from Minerva. Aurizon Network said these adjustments reflect recent track survey data and current approvals for rollingstock in operation.[776]	The following loading facilities have been removed: • German Creek • Oaky Creek • Lake Vermont. Aurizon Network said this was to update the list to contain only load outs connecting to the Blackwater System.[777] A specific AT_3 reference tariff component premium has also been included for Minerva. Aurizon Network said this has been included as the Blackwater System reference tariff is insufficient to meet the required Minerva access charge and a replacement	For Blackwater System and cross-system train services, the nominal nt has been increased from 8,211 to 8,369 tonnes.

[774] Aurizon Network, sub. 1, Appendix P.1: 29.
[775] Aurizon Network, sub. 48: see cls. 7–11 of schedule F.
[776] Aurizon Network, sub. 40: 262.
[777] Aurizon Network, sub. 40: 262.

System	***Changes to maximum comparative length of a train***	***Changes to nominated loading and/or unloading facilities***	***Changes to nominal train payload***
		tariff must therefore be levied to account for the shortfall.[778]	
Goonyella	No changes.	No changes.	For the Goonyella System and cross-system train services, the nominal nt has been increased from 10,055 to 10,236 tonnes.
Moura	Increased from 1,000 to 1,716 metres, unless operating from Callide or QAL where it will be 1,000 metres. Aurizon Network said this was to reflect recent track survey data and to correct for operating Blackwater length trains. It also reflects current approvals for rollingstock in operation.[779]	No changes.	For the Moura System and cross-system train services, the nominal nt has been increased from 6,269 to 8,379 tonnes. A new nominal nt of 4,955 tonnes has been included for a Moura train service that has Callide as a loading facility or QAL as an unloading facility.
Newlands	No changes.	No changes.	For the Newlands System and cross-system train services, the nominal nt has been increased from 6,871 to 7,635 tonnes.
Goonyella to Abbot Point (GAPE)	No changes.	Inclusion of Millenium and Goonyella as nominated loading facilities, each with a loading time per return trip of three hours. Aurizon Network said this was to include additional contracted load out facilities.[780]	For the GAPE System and cross-system train services, the nominal train payload is proposed to be decreased from 6,871 to 6,800 tonnes.

Aurizon Network said the amendments to the nominal train payloads have been made to reflect either the consist configuration or weighted average consist configuration for each system which is expected to operate during the UT5 regulatory period. It said this is a methodology consistent with that applied in the UT4 reference tariff modelling.[781]

Aurizon Network said the additional nominal payload for the Moura System was proposed to reflect that train services to Callide and QAL consistently operate as a much smaller consist. It said this amendment would make the distinction more transparent, as Schedule F of the 2017 DAU currently uses an average of the short and long payloads.[782]

[778] Aurizon Network, Response to QCA requests for information, 13 July 2018.
[779] Aurizon Network, sub. 40: 263.
[780] Aurizon Network, sub. 40: 262.
[781] Aurizon Network, Response to QCA requests for information, 13 July 2018.
[782] Aurizon Network, Response to QCA requests for information, 13 July 2018.

The QCA considers that the Schedule F provisions relating to the determination of reference tariffs provide an appropriate framework for the various reference tariffs that Aurizon Network proposed to apply to coal-carrying train services during the UT5 pricing period. These provisions provide relevant information about the reference train service characteristics, so that an access holder can have certainty that it will pay the reference tariff if it meets the reference train service characteristics. The provisions also provide important information to access seekers.

However, the QCA considers these provisions should be amended to reflect Aurizon Network's proposed amendments to the system reference tariffs, such as the changes to the maximum comparative lengths of trains and the loading and unloading facilities, as these reflect the most up to date information.

We have considered s. 138(2) of the QCA Act in reaching the decision and in particular consider that our proposed amendments are in the legitimate business interests of Aurizon Network, as well as the interests of access seekers and access holders (s. 138(2)(b), (e) and (h)).

9.3 Processes for the review and variation of reference tariffs

Aurizon Network's proposal

The allowable revenue Aurizon Network is entitled to earn from the $AT_{2\text{–}4}$ (or AT_5, where applicable) tariff components for a year is specified in the 2017 DAU[783], these are adjusted in accordance with the approved undertaking. The 2017 DAU also provides for the calculation of allowable revenue in relation to cross-system train services (cl. 4.2).

After the end of each year, Aurizon Network must calculate an $AT_{2\text{–}4}$ (and AT_5, where applicable) revenue adjustment amount for each reference tariff for that year (cl. 4.3). This calculation is made by subtracting the adjusted allowable revenue from the total actual revenue for these tariff components.

The calculation of the adjusted allowable revenue for a reference tariff involves making adjustments based on various specified components (cl. 4.3(c)). For example, the recovery of Aurizon Network's maintenance allowance being adjusted to reflect the difference between the relevant actual and forecast maintenance cost index (MCI) values for the year).

The calculation of total actual revenue for $AT_{2\text{–}4}$ for a reference tariff is set out under cl. 4.3(d)–(f). It includes particular deeming provisions, including that relevant take-or-pay, and transfer and relinquishment fees are calculated on the basis that Aurizon Network is deemed to have contracted on the terms of the relevant standard access agreement that applied on the date of execution or renewal of an Access Agreement, subject to particular exceptions (cl. 4.3(d)(ii)). The calculation of total actual revenue for AT_5 is set out in cl. 4.3(g).

Aurizon Network's 2017 DAU includes processes by which reference tariffs are reviewed and varied during the regulatory period. Any reviews and variations to reference tariffs must be approved by the QCA.

Aurizon Network's 2017 DAU requires an annual review of reference tariffs (cl. 4.1). Prior to the beginning of each year (except the first year) during the regulatory period, each reference tariff will be adjusted to reflect the variations to the applicable allowable revenue due to an:

[783] See the following clauses: the Blackwater System reference tariffs, cl. 7.3; the Goonyella System reference tariffs, cl. 8.3; the Moura System reference tariffs, cl. 9.3; the Newlands System reference tariffs, cl. 10.3; the Goonyella to Abbot Point System reference tariffs, cl. 11.3.

- over- or under-recovery of allowable revenue for $AT_{2–4}$ (or AT_5 where applicable) from two years ago[784] (as set out under cl. 4.4(a)(i)), including the return on capital on this amount (cl. 4.4(b)). How the revenue adjustment amount is calculated is set out under cls. 4.3–4.4 (as discussed above), while the process for the QCA to approve revenue adjustment amounts is set out in cl. 4.3(h)–(q).
- adjustment to next year's allowable revenue and the reference tariff due to a revised gtk forecast (the process for this type of adjustment is set out under cl. 4.1(b)–(e)).

Clause 5 sets out the process for Aurizon Network to submit reference tariff variations and the QCA's approval process for such submissions. In addition to the annual review of reference tariffs outlined above, a reference tariff variation:

- may be submitted if Aurizon Network considers that the variation will promote efficient investment by either Aurizon Network or another person in the supply chain
- must be submitted, following:
  - an endorsed variation event (as defined in cl. 5.2), which includes a change in law or relevant taxes that would cause a change in the costs reflected in the AT_3, AT_4 or AT_5 reference tariff inputs of greater than 2.5 per cent
  - a review event (as defined in cl. 5.3), which is the occurrence of particular defined force majeure events (such as an act of god, fire or flood) affecting Aurizon Network to the extent it incurs additional incremental costs of greater than $1 million.

Aurizon Network's 2017 DAU also includes provisions for adjustment charges (cl. 6). These apply if a reference tariff (or variation to a reference tariff) is applicable or effective from a date prior to the date it was approved by the QCA. These charges are, in essence, intended to allow Aurizon Network to recover from, or reimburse to, an access holder the difference between the access charges that would have been payable had the access charges been calculated in accordance with the approved reference tariff (or approved variation) and the access charges actually paid.

[784] Under the adjustment process, an under- or over-recovery of allowable revenue will effectively be rectified two years after it occurs.

QCA analysis and decision

Summary of decision 9.2

- **The QCA considers the appropriate way for Aurizon Network to amend its draft access undertaking is to revise:**
  - **(a) the calculation of adjusted allowable revenue in cl. 4.3(c)(ii). In addition to adjustments to reflect differences between actual and forecast CPI, the QCA's decision is to require that cl. 4.3(c)(ii) include adjustments to reflect differences between actual and forecast WPI**
  - **(b) the calculation of total actual revenue in cl. 4.3(d), 4.3(g) and the approval of revenue adjustment amounts to provide for an additional adjustment in circumstances where Aurizon Network has failed to meet its obligations to minimise disruption to train services**
  - **(c) cl. 4.4(a)(ii) to include the WPI.**
- **The QCA's required amendments are provided in the Amended 2017 DAU at Appendix H.**

With the exception of the matters noted below, the QCA considers that the provisions proposed by Aurizon Network are appropriate to approve under s. 138(2) of the QCA Act. As part of Aurizon Network's 2016 Undertaking process, they were reviewed and considered and Aurizon Network did not propose any changes to these provisions. We have reviewed and considered the provisions afresh and remain of the opinion that the provisions are appropriate to approve, with the exception of the adjustment of allowable revenues and revenue cap arrangements.

The QCA's reasons for reaching this decision are set below. Additional issues have been raised by stakeholders which are also discussed below. These relate to the approval of the electric energy charge; access facilitation agreements and rebates; review events; and revenue–cap arrangements.

9.3.2 Electric energy charge (EC component)

Aurizon Network supplies electricity to electric traction train operators through its overhead distribution network on the Goonyella and Blackwater Systems. Aurizon Network procures electricity through a supply agreement with an electricity retailer, and recovers the cost of providing this service through the EC component of reference tariffs.

Clause 2.2 of Schedule F sets out the various inputs for the calculation of access charges, including the EC component.

Aurizon Network said that the distribution of electricity does not form part of the declared service and that Aurizon Network provides the service (distribution of electricity) at cost.[785] In any event, we are statutorily required to consider whether the 2017 DAU is appropriate after having regard to the s. 138(2) factors.

Our decision in relation to the calculation and approval of the EC component of reference tariffs is contained in Chapter 7. This chapter considers the process for review and approval of the EC reference tariff component contained in Schedule F.

[785] Aurizon Network, sub. 1: 241.

The initial EC component is specified in relation to each relevant reference tariff in Schedule F.[786] However, there is a lack of clarity regarding the process for seeking QCA approval of annual changes to the EC component outlined in cl. 2.2. Aurizon Network's drafting provides that Aurizon Network will publish the applicable EC component on or about 31 May each year during the term after it has sought and obtained the QCA's approval. There are no parameters guiding this approval process either for Aurizon Network or the QCA which leaves the QCA with wide discretion as to its approval and may lead to unnecessary uncertainty in the future. For example, there are no criteria against which the QCA should assess the EC component and process for doing so; therefore, there is no way to evaluate whether any QCA assessment is appropriate. This could be addressed by inclusion of having the revised EC component assessed on the basis that it is reasonable and any consequential adjustments to allowable revenue (if any) are calculated properly.

Aurizon Network said it is willing to submit a DAAU to amend the EC component going forward. Aurizon Network submitted that using a DAAU process, which is subject to the s. 138(2) criteria, provides the QCA with appropriate oversight of the EC component. Aurizon Network said that adopting the criteria suggested by the QCA was unlikely to provide additional benefits to users or Aurizon Network.[787]

The QCA notes that the intention of its proposal to introduce clearer criteria for the approval of the EC component was primarily to provide greater certainty to Aurizon Network. While the QRC supported the proposed change,[788] the QCA considers that not including the proposed change does not limit the QCA's discretion in approving EC components under cl. 2.2. We also note that Aurizon Network has committed to seek approval for the EC component annually, using a DAAU process. For these reasons, and in acknowledgement of Aurizon Network's position, the QCA considers it appropriate to approve cl. 2.2 as proposed in Aurizon Network's 2017 DAU, having regard to s. 138(2)(a), (g) and (h) of the QCA Act .

Relevantly, the QCA will rely on the expectation afforded by Aurizon Network through cl. 2.2 that revised EC components, taking into account any over- or under-recovery from the previous year, will be submitted to the QCA for approval annually. In the event that this does not occur, the QCA may seek to undertake an *ex post* reconciliation of electric traction energy costs as a part of the subsequent DAU investigation process (UT6).

9.3.3 Calculation of adjusted allowable revenue for operating costs

Chapter 7 of this decision includes our consideration of Aurizon Network's proposed operating costs. However, in Aurizon Network's 2017 DAU, cl. 4.3(c)(ii) of Schedule F provides for an annual adjustment to the operating costs component of allowable revenue to account for the difference between the actual CPI for the relevant year and the forecast CPI value that was used for the purposes of determining the relevant reference tariff for that year.

For the reasons discussed in Chapter 7, we consider it appropriate to include an additional adjustment for the WPI. Clause 4.3(c)(ii) should be amended to include adjustments to reflect the difference between the actual WPI value for the relevant year and the forecast WPI value that was used to determine the relevant reference tariff for that year.

In addition, we require that cl. 4.4(a)(ii) be amended to include the term WPI, so that the allowable revenue for all subsequent years be adjusted to reflect the actual change in the WPI

[786] See cls. 7.2, 8.2.
[787] Aurizon Network, sub. 40: 260–261.
[788] QRC, sub. 53: 33.

as used in the calculation of the approved revenue adjustment amount. The relevant definition of WPI would read as 'The Wage Price Index: Queensland, Private, All Industries (Australian Bureau of Statistics Publication No. 6345.0, Table 3a, Series ID: A2704548F)'.

In the interests of clarity, the QCA also considers it appropriate to amend the Part 12 definition of CPI to include additional descriptive detail regarding the relevant ABS source publication. The definition of CPI has been amended to read as 'The Consumer Price Index: All Groups - Brisbane (Australian Bureau of Statistics Publication no. 6401.0, Tables 1 and 2, Series ID: A2325816R)'.

9.3.4 Calculation of total actual revenue

Clause 4.3 of Schedule F of the 2017 DAU contains provisions for the calculation of Aurizon Network's total actual revenues as part of the annual revenue cap adjustment process. This includes the AT_2-AT_5 revenues, take or pay and relinquishment fees as well as revenue Aurizon Network would have been entitled to earn but for negligence or a breach of an access agreement (subject to a materiality threshold) (Schedule F, cl. 4.3(d)(iii), (g)(ii)).

Some stakeholders considered, in response to the draft decision and the consultation paper on maintenance matters, that amendments to the revenue cap calculations were required as they are concerned that Aurizon Network might deliberately choose to operate the network in way that adversely affects the capacity of the network.[789]

The QRC said that revenue cap arrangements are 'too effective' in insulating Aurizon Network from the effects of its own performance or actions.[790] The QRC said Aurizon Network's recent changes to its operating and maintenance practices are deliberate and wrongful. On this basis Aurizon Network should not be able to recover revenue which it has otherwise lost given its clear intention to deliberately and intentionally operate and maintain the network in a way that adversely affects the capacity of the network.[791]

Anglo American and Pacific National also supported adjustments to the revenue cap where a reduction in system throughput is attributable to maintenance and operational practices implemented by Aurizon Network.[792]

Aurizon Network said that introducing amendments to the revenue cap at this stage in the regulatory assessment process would be inappropriate. It said that varying the materiality threshold for the adjustment for negligence or a breach of an access agreement imposes an unreasonable asymmetric and uncompensated risk (that would be difficult to satisfactorily address), affects its modelling assumptions (that have consequences for network utilisation and capacity) and does not allow for offsets where it increased throughput by taking actions to mitigate losses caused in other parts of the supply chain.[793]

The QCA has always maintained that Aurizon Network should not necessarily recover its revenue, via the revenue cap adjustment, in all circumstances—and that adjustments may sometimes be appropriate. Aurizon Network's 2017 DAU already provides for an adjustment for negligence or a breach of an Access Agreement.

[789] Anglo American, sub. 57: 4, Pacific National, sub. 61: 10, 24, Annexure; sub. 66: 9–10; QRC, sub. 53: 35, 37–38; sub. 65: 13–14, Attachment 1: 47–48, 50.
[790] QRC, sub. 53: 35.
[791] QRC, sub. 53: 37–38; sub. 65: 13–14, Attachment 1: 47–48, 50.
[792] Anglo American, sub. 57: 4, Pacific National, sub. 66: 10.
[793] Aurizon Network, sub. 64: 30–31.

Given stakeholder concerns over the intent of Aurizon Network's announced changes in operating and maintenance practices, the QCA considers this warrants a further adjustment, tied to Aurizon Network's obligation to use reasonable endeavours in planning and implementing operational constraints to minimise disruption to train services (see Appendix H).

The focus is on those circumstances where network performance (and corresponding revenues) are adversely affected by factors that are entirely within Aurizon Network's control. Accordingly, the QCA has proposed that the adjustment be made only where Aurizon Network has wilfully breached its obligations to minimise disruption to train services (see Appendix H). This means an adjustment is expected to be made where it is obvious and clear that Aurizon Network could have earned revenue, but did not because of an intentional or deliberate decision. In this instance, Aurizon Network is not entitled to earn such revenue.

Where Aurizon Network is applying its railway management expertise to reasonably minimise disruption, such as efficiently managing possessions of the network and applying good operating practice, it should not be subject to these provisions. Nonetheless, the QCA considers that simply disrupting train services, albeit within a contractual allowable threshold, is not a constructive outcome from a commercial or regulatory perspective. The QCA's views and reasons for including an obligation to minimise disruption to train services is discussed in detail in Chapter 17.

Consistent with past practice, the QCA intends to continue to provide stakeholders with an opportunity to comment on Aurizon Network's revenue adjustment claim as part of its approval of revenue adjustment amounts. This means access holders and other parties can present information on their views regarding Aurizon Network's actions and activities. The reporting requirements (that detail why services have been disrupted, see Chapter 20) will provide some insights into whether an adjustment is appropriate.

The QCA has made this decision having regard to the factors outlined in s. 138(2) of the QCA Act. The required amendments are consistent with the objects of Part 5 and s. 168A and strike an appropriate balance between the legitimate business interests of Aurizon Network and the interests of users and access seekers (ss. 138(2)(b), (e) and (h)) by providing for Aurizon Network to continue to recover the revenue it is entitled to earn—but ensuring Aurizon Network does not use the revenue cap adjustment mechanism to recover lost revenue which it did not earn because of circumstances that are entirely within its reasonable control.

9.3.5 Access facilitation rebates

Pacific National raised concern that rebates received by access holders who are parties to access facilitation deeds are commercial arrangements separate from the regulatory process and questioned circumstances where rebates paid by Aurizon Network to an access holder are socialised amongst other access holders via the regulatory adjustment processes.[794]

The QCA notes that since the 2001 Undertaking such rebate arrangements were contemplated within the regulatory framework.[795] We also note that Aurizon Network's 2016 Undertaking and 2017 DAU provide for variations between actual and forecast payments of such rebates to be included within adjusted allowable revenues (see for example, cl. 4.3(c)(vii) of Schedule F).

[794] Pacific National, sub. 19: 19.

[795] For example, see cl. 6.4(b) of the 2001 Undertaking; cl. 6.5.2(f) of the 2006 Undertaking; and cl. 6.5.2(d) of the 2010 Undertaking.

In this context, we do not consider the issues raised by Pacific National mean that it is not appropriate to approve the 2017 DAU with respect to rebate arrangements. To the extent that agreements underpinning the access facilitation rebates reflect the approved regulatory arrangements, then the regulatory adjustment processes provide a means for such payments to integrate within the overall revenue-cap framework.

For the reasons outlined above, the QCA considers that it is appropriate to approve these aspects of Aurizon Network's 2017 DAU. The QCA has considered the s. 138(2) factors and in particular considers the relevant provisions consistent with the object of Part 5 of the QCA Act and provide an appropriate balance between the legitimate business interests of Aurizon Network and the interests of access seekers and access holders (s. 138(2)(a), (b), (e) and (h)).

9.3.6 Review event mechanism for floods and endorsed variation event for QCA levy

Anglo American raised a number of concerns in relation to flood review events and the recovery of Aurizon Network's costs in repairing and maintaining affected track. Anglo American maintained that the review event process is not appropriate for addressing flood damage. It noted:[796]

- Aurizon Network does not proactively include users in its recovery/repair process and cost build-up leading up to a review event claim.
- Repair costs are not transparent.
- There is no strict rule for classification of costs.
- The application of Aurizon Network's insurance coverage is never clear.
- Review event recovery becomes an un-budgeted cost for users and the timing of recovery becomes a significant 'price-shock' for users.
- Aurizon Network makes a windfall gain by escalating recovery costs at WACC rather than a normal holding cost of debt making a review event a revenue raising exercise not a cost pass-through mechanism.

Moreover, Anglo American claimed that Aurizon Network is not incentivised to process and seek approval of review events quickly. It suggested that review event costs should be capitalised and:

> included in the tariffs from the time of approval (and not retrospectively) to be reconciled in the annual revenue reconciliation process until recovered based on usage not 'Take or Pay'.[797]

The QCA has stated in previous decisions that we do not consider escalation provides double-recovery or escalates payments already made. Escalation does not reflect a return on the repair costs, but rather compensation for the fact that recovery of the passed-through costs is delayed by virtue of the application and approval processes.[798] We have not changed our understanding of the characterisation of this escalation and note that our approach is supported by other regulatory precedents.[799]

[796] Anglo American, sub. 18: 23–24.
[797] Anglo American, sub. 18: 24.
[798] QCA 2016e: 10.
[799] See, for example the National Electricity Rules, cls. 6.6.1(j), 6A.7.3(j)(4), 6A.7.2(i)(4); Western Power 2015: 42; Utilities Commission 2014: 17: IPART 2012: 52.

We also note that the review event provisions provide that Aurizon Network must lodge a review event within 60 days of the event.[800] These timeframes provide for a structured timeframe for Aurizon Network to operate within. We consider that these timeframes are reasonable, given the often significant amount of work it takes to create a review event submission.

During the 2016 Undertaking approval process additional reporting criteria for self-insurance was included (now contained in cl. 3.7.2 of the 2016 Undertaking).[801] The information required by the additional criteria is yet to be published so we do not consider it appropriate to require amendments in this regard at least until the relevant information has been made public. Once more information has been provided, all parties concerned will have more information upon which to base their assessment.

For further discussion regarding the interaction between self-insurance and review events see Chapter 7.

Finally, the process for and the fairness of any review event adjustment are considered in-depth by the QCA when Aurizon Network submits a review event claim for approval. For example, recent review events in relation to floods in the Moura System have been approved on the basis that those parties who benefit from the required maintenance costs cover that aspect of recovery and those parties (including future users) who will benefit from the required capital costs cover that aspect.[802]

For these reasons, the QCA considers it appropriate to approve this aspect of the 2017 DAU. The proposed drafting strikes an appropriate balance between the interests of users, access seekers and Aurizon Network by allowing a detailed consideration of the fairness and equity of each particular review event rather than mandating a rule which may or may not be appropriate in differing circumstances (s. 138(2)(b), (e) and (h)). The QRC also made comments in respect of the variation of reference tariffs for changes to the QCA levy tariff input. This type of change is an endorsed variation event (cl. 5.2 of schedule F), with the process for these variations set out under cl. 5 of schedule F.

QRC proposed the 2017 DAU should be amended to clarify that, in approving the QCA levy, the QCA 'may have regard to the extent to which the QCA's costs were contributed to by unreasonable or unsubstantiated claims or proposals of Aurizon Network'. It considered this should apply where, for example, Aurizon Network fails to meaningfully consult with customers prior to submitting a DAAU that is ultimately rejected. While it considered QCA could make this decision under existing drafting of the 2017 DAU, it said the undertaking would benefit from further clarity.[803]

The QCA considers the arrangements in Aurizon Network's 2017 DAU for the variation of reference tariffs are appropriate to approve, including in respect of variations due to changes in the QCA levy input. The 2017 DAU arrangements are consistent with existing arrangements and provide an appropriate process by which these variations are proposed and justified by Aurizon Network, and ultimately approved by the QCA.

The QCA is not satisfied there is sufficient justification to insert the additional consideration for the QCA's assessment on QCA levy variations, as proposed by QRC. The proposal seeks to

[800] These timeframes are subject to Aurizon Network seeking an extension (cl. 5.6).
[801] QCA 2014b: 159.
[802] QCA 2017d.
[803] QRC, sub. 53: 35.

introduce concepts of 'unreasonable or unsubstantiated claims by Aurizon Network', which the QCA considers would introduce a level of uncertainty about when it ought to be applied that would likely make it difficult to apply in practice. The QCA considers the 2017 DAU arrangements are appropriate, and provide an appropriate balance between the interests of Aurizon Network, access seekers and access holders (s. 138(2)(b), (e) and (h)), but will of course revisit this matter in future regulatory processes if it becomes an issue.

9.4 Take-or-pay arrangements

Aurizon Network's proposal

Take-or-pay charges are an amount payable by an access holder for not using contracted train service entitlements in a year. They enable Aurizon Network to recover revenue that would otherwise be foregone, and are intended to provide a price signal to customers about efficient contracting and reduce the incentive to over-contract.

The take-or-pay arrangements for Access Agreements that were entered into since 1 October 2010 (that is, during the 2010 Undertaking, 2016 Undertaking or the proposed 2017 DAU) are set out in cl. 3.3 (referred to as 'new take–or-pay arrangements'). Different take-or-pay arrangements apply to access agreements executed or renewed prior to this point-in-time (discussed further below).

Broadly, the calculation of take-or-pay for access agreements that were entered into since 1 October 2010 follows a three-stage process as outlined in the table below.

Table 87 Take-or-pay arrangements in the 2017 DAU

1. Calculation of maximum potential take-or-pay The maximum potential take-or-pay is calculated on the basis of the difference between the access holder's contracted train services for a year and the number of train services operated that year (excluding train services not operated due to an Aurizon Network cause). The applicable tariff components for take-or-pay purposes are 100% of AT_2, AT_3 and AT_4. The detailed provisions for determining this calculation are set out in cl. 3.3(d) to (g).
2. Application of the take-or-pay trigger Once the access holder's maximum potential take-or-pay has been calculated, the take-or-pay trigger is applied to determine whether any take-or-pay liability exists in relation to a particular reference tariff (cl. 3.3(h)). Take-or-pay for a tariff will not be payable for a year where the aggregate of the gtk for all coal-carrying train services operated for that year (to the extent the access charges for those train services are set by reference to the relevant reference tariff) exceeds 100% of the gtk forecast identified for that year for that reference tariff (excluding the gtk not achieved due to an Aurizon Network cause).
3. Application of 'capping' mechanisms If take-or-pay is still payable following application of the take-or-pay trigger, the following capping mechanisms are applied (in order) to determine any reductions to an access holder's take-or-pay liability. First, mine capping is applied (cl. 3.3(j)). • This applies if there are multiple access agreements with Aurizon Network in respect of an end user for the same origin–destination pair (i.e. the end user may be the access holder under one access agreement or the customer of a train operator that is the access holder under another access agreement). • If train services operated under one access agreement exceed the train service entitlement for a year, mine capping enables the additional $AT_{2–4}$ revenue from that agreement to be offset against take-or-pay liability in another agreement[804] for that year (to the extent both are set by reference to the same reference tariff). Second, tariff capping is applied (cl. 3.3(k)–(m)). • Tariff capping may result in an exemption or a reduction of take-or-pay liability on the basis that Aurizon Network's total revenue for $AT_{2–4}$ in relation to the reference tariff will exceed Aurizon Network's relevant allowable revenue. • If total revenue[805] is: – greater than or equal to the allowable revenue for $AT_{2–4}$ in relation to the relevant reference tariff, tariff take-or-pay is not payable for that year under those access agreements – less than the allowable revenue for $AT_{2–4}$ in relation to the relevant reference tariff, Aurizon Network will calculate the aggregate amount of take-or-pay it is entitled to earn from all full take-or-pay agreements and if that exceeds the allowable revenue for $AT_{2–4}$, then it will reduce each access holder's take-or-pay liability by that access holder's proportion of the maximum take-or-pay amount. • In determining what Aurizon Network would be entitled to earn, Aurizon Network is deemed to have contracted on the terms of the relevant standard access agreement that applied on the date of execution or renewal of an access agreement, subject to particular exceptions (cl. 3.3(m)).

Specific take-or-pay arrangements apply to expansion tariffs.[806] Broadly, these use the same calculations to determine the maximum potential take-or-pay (Table 87), although with the inclusion of an additional tariff component (AT_5) (cl. 3.3(n)). However, unlike the arrangements outlined above, there is no take-or-pay trigger test or no capping mechanisms to remove or reduce an access holder's take-or-pay liability in respect of an expansion tariff.

[804] Excluding access agreements executed or renewed prior to 1 October 2010.

[805] For the purposes of this provision, total revenue is the total actual revenue for $AT_{2–4}$ in relation to access charges set by reference to the relevant reference tariff (less the aggregate of tariff take-or-pay that Aurizon Network is entitled to earn from all access agreements executed or renewed prior to 30 June 2006).

[806] Chapter 15 provides further details on expansion tariffs.

Historical take-or-pay arrangements

Clause 3.2 describes the historical take-or-pay arrangements that apply to the UT1 and UT2 access agreements, including references to the relevant clauses of the applicable access undertaking. The following table provides a summary of the take-or-pay arrangements across these access undertakings.

Table 88 Historical take-or-pay arrangements

Element	***UT1***	***UT2***
Applicable tariff components	30% of AT_3 30% of AT_4	100% of AT_2 100% of AT_3 100% of AT_4
Take or pay volumes	Take-or-pay applicable to shortfall against 100% of contract volume for annual component and shortfall against 90% of contracted volume for variable component (excluding train services not operated due to Aurizon Network cause.	Applicable to shortfall against 100% of contract volume (excluding train services not operated due to Aurizon Network cause)
Take or pay trigger test	Annual component: • 100% of system forecast gtk less Aurizon Network cause gtk Variable component: • 90% of access holder's contracted gtk, less Aurizon Network cause gtk; and • for the last 3 months the actual (mine-level) volume is less than or equal to 90% of contract volume less Aurizon Network cause gtk.	Annual component: • 100% of system forecast gtk less Aurizon Network cause gtk.
Capping provisions	None	Mine capping Tariff capping

QCA analysis and decision

Summary of decision 9.3

- **The QCA's decision is that Aurizon Network's 2017 DAU be amended to revise cl. 3.3(e) to:**
  - **(a) clarify that the calculation of nt and ntk in that clause is for the purpose of cl. 3.3(d)(iii)(B) (1) and (2)**
  - **(b) provide that the nt and ntk will be calculated using a 'train payload as reasonably determined by Aurizon Network'.**
- **The QCA's required amendments are provided in the Amended 2017 DAU at Appendix H.**

The QCA has some concerns in relation to the calculation of nt and ntk for the purposes of calculating take-or-pay. Stakeholders also raised concerns regarding the ongoing impact of UT1 access agreements and requested mechanisms to allow for pooling of take-or-pay by system.[807]

nt and ntk calculations

Stakeholders and Aurizon Network have pointed to the fact that parties are contemplating the introduction of longer trains to the CQCN. The QCA wants to ensure that all parties consider how such innovations will have an impact on or be impacted by the terms of the 2017 DAU.

To this end, the QCA considers that the provisions that provide the processes for reviewing and varying reference tariffs are, for the most part, appropriate, subject to the matters identified below.

The QCA considers cl. 3.3 requires amendment to clarify the operation of these provisions under different circumstances. That is, in the event that actual train payloads differ significantly from the relevant nominal train payload. For example, if longer trains are introduced without a concomitant change in the nominal train payload, the calculations of take or pay in cl. 3.3(d) may not reflect the intended liability.

QRC suggested that nt and ntk for the purposes of take or pay calculations should be based on the nominal payload contained in the relevant access agreement, as this is the basis on which the access agreement has been negotiated and is the basis on which the capacity required for the contract was assessed.

QRC considered the use of a nominal train payload specified in the undertaking may not be appropriate because:

- if this is lower than the contracted nominal payload, it will reduce take or pay liabilities and may not fully reflect the capacity which was effectively reserved for the higher payload train;
- if it is greater than the contracted nominal payload, there will be a take or pay liability even where all of the contracted paths were used at the expected payload.

QRC also considered use of actual train payload as an alternative payload measure may not be appropriate if actual payloads are:

- greater than nominal train payloads, as the access holder should not be penalised in the form of higher take or pay for using the paths more efficiently;

[807] Pacific National, sub. 19: 17, 19; sub. 61: 18; Dalrymple Bay Coal Chain Coordinator, sub. 17.

- less than nominal train payloads, as take or pay should not be reduced because this would socialise the revenue shortfall with other customers.[808]

Aurizon Network supported retaining its proposed 2017 DAU drafting on this matter. It considered that because references tariffs (and the MAR and SAR) are set by reference to nominal train payloads, take or pay should also be based on those same nominal payloads. It said this would provide certainty, transparency and simplicity, and removes discretion on the part of Aurizon Network in the calculation of take or pay.[809]

The QCA notes that under the 2010 Undertaking, the equivalent provisions provided that the calculation of nt and ntk was to be determined using a nominal payload 'as reasonably determined'. Phrasing the provision in this way provides some flexibility (albeit constrained by what is reasonable in the circumstances) for calculations where the actual payload differs from the relevant nominal payload.

Because of the prospect of this provision operating to distort the calculation of take-or-pay in the future should there be changes to the length of trains or other innovations, the QCA considers that it is important to clarify the operation of the provision and provide some flexibility to account for possible future scenarios.

Therefore, the QCA requires that cl. 3.3(e) be amended so that it is specified that the calculation of nt and ntk is for use in respect of cl. 3.3(d)(iii)(B) (1) and (2) but not (3). Also, the words at the end of cl. 3.3(e) should be amended to provide that the nt and ntk will be calculated using a 'train payload as reasonably determined by Aurizon Network'. The QCA considers that these amendments will clarify the operation of the calculation and provide some flexibility, which is in the interests of Aurizon Network and access holders (s. 138(2)(b) and (h)). Aurizon Network's choice of nominal payload must always be reasonable; and in the circumstances where a standard reference train is utilised, the most reasonable choice would be the relevant nominal train payload (NTP) for the applicable reference tariff. However, if particular trains are introduced so that the relevant NTP no longer matches (or is significantly different from) the actual payloads being used, it would arguably no longer be reasonable to utilise the NTP.

Accordingly, for the reasons above, the QCA consider it appropriate that cl 3.3(e) be amended as specified above.

UT1 take-or-pay arrangements

Pacific National raised a concern that the impact of the remaining UT1 access agreement take-or-pay obligations may be socialised across access holders who hold access agreements signed under later access undertakings.[810] Pacific National said that, at some point in the future, the differences in take-or-pay treatment for access agreements from different periods need to be addressed.[811] The QCA has previously said that it is a long-term objective to harmonise take-or-pay from different periods.[812] However, the QCA has also noted, in relation to possible inequities the other way, that access holders who are currently parties to a UT1 access agreement could agree with Aurizon Network to transit to the current access agreements at any time.[813] Aurizon Network has also previously said that, as UT1 access agreements do not benefit

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[808] QRC, sub. 53: 33–34.
[809] Aurizon Network, sub. 40: 261–262.
[810] Pacific National, sub. 19: 19.
[811] Pacific National, sub. 19: 19; sub. 61: 18.
[812] QCA 2016c, Volume III — Pricing & tariffs: 268.
[813] QCA 2016c Volume III — Pricing & tariffs: 267.

from any capping arrangements, it is more likely that take-or-pay liabilities will be disproportionately allocated to UT1 access agreements.[814] Similar sentiments were also expressed by the QRC.[815] Based on this, UT1 access holders may be incentivised to transfer to the more recent access agreement arrangements.

However, there are also aspects of UT1 access agreements which may make it beneficial for access holders to remain under UT1 access agreement arrangements. For example, if annual take-or-pay is triggered, take-or-pay on UT1 agreements is only 30 per cent on the AT_3 and AT_4 components under these arrangements, as opposed to 100 per cent under the access agreements entered into from UT2 onwards. Similarly, under the UT1 arrangements there is no AT_2 component payable for take-or-pay.

In any event, the QCA notes that Aurizon Network has also previously stated that most UT1 access agreements will expire during the UT4 period. Given this statement by Aurizon Network, most existing UT1 access agreements may become based on standard access agreements during the UT4/UT5 undertaking period due to the operation of the renewal provisions in the 2017 DAU or via the renegotiation of new access agreements. On this point, the QCA notes Pacific National's comments that Aurizon Network and the QCA should provide further clarification on the number of UT1 access agreements that remain on foot, the expected expiry dates and the approximate tonnages linked to these agreements, which it considered may contribute to resolution of this matter.[816] The QCA does not consider that publishing this information in of itself will achieve a resolution of this matter. As noted above, the QCA understands the imperatives for harmonising take-or-pay arrangements across different generations of access agreements. However, to effect changes to these matters requires extensive consultation with all stakeholders, especially those with existing UT1 access agreements.

The QCA believes that the current arrangements are appropriate in the circumstances and strike an appropriate balance between Aurizon Network's legitimate business interests, current access holders' interests and the interests of access seekers (s. 138(2)(b),(e),(h)).

Take-or-pay pooling

The Dalrymple Bay Coal Chain Coordinator (DCCC) has submitted a proposal to adopt a take-or-pay pooling mechanism on a system basis.[817] At a high-level, the proposal would provide that excess train service entitlements from one 'origin to destination' pairing in an access agreement could be used to offset underutilised train service entitlements from a different origin and destination pairing (within the same access agreement).[818] The DCCC's submission outlines a number of purported benefits including:

- increased flexibility in the utilisation of access rights
- realising greater throughput and efficiencies in the Goonyella System
- encouraging access holders to work together to maximise system throughput
- no adverse impacts on system users who choose not to adopt take or pay pooling

[814] See Aurizon Network 2013c: 267–269.
[815] QRC, sub. 53: 34.
[816] Pacific National, sub. 61: 18
[817] Pacific National (a member of the DCCC) also separately supported the implementation of take-or-pay pooling; see Pacific National, sub. 19: 17; sub. 61: 17.
[818] Dalrymple Bay Coal Chain Coordinator, sub. 17: 2.

- take-or-pay variances as a result of a pooling arrangement are expected to be minimal, as only AT_3 is based on distance, and assuming both pairings use the same train consist, there will be no difference in the AT_2 and AT_4 tariff components
- the pooling mechanism is supported by the scheduling principles in Schedule G of the 2016 Undertaking which can facilitate short-term transfers and will overcome complicated and impractical limitations contained in the approved short-term transfer provisions.

The QCA's decision is that it is not appropriate to include a take-or-pay pooling regime in Aurizon Network’s 2017 DAU. The QCA notes that the short-term transfer provisions have only been operating for a relatively short-period of time and are subject to ongoing improvements. It is not appropriate to bypass these provisions without giving them a chance to be incrementally improved and made more efficient over time.

In addition, the QCA has a number of concerns with the proposed pooling regime:

- The QCA does not consider that the proposed arrangement necessarily provides a greater incentive for users to maximise throughput. In the usual course, if an access holder meets its contracted train service entitlements, it would not be subject to take-or-pay even in the event that take-or-pay is triggered generally. That is, access holders are incentivised mainly by their own self-interest. Therefore, the QCA does not see that the proposed arrangement is either more or less likely to maximise throughput.
- The proposed arrangements would reduce the take-or-pay of those users that choose to be in the pool. However, if total actual revenue is less than the system allowable revenue, the reduction in take-or-pay enjoyed by those in the pool will be accompanied by an increase in the amount to be recovered through the annual revenue cap adjustment mechanism borne by all system users. The impacts of the proposed arrangement will be distributed equally across all users only if all users are included in the pooling arrangements.
- Differences between offset pairings in relation to the AT_3 component will not necessarily be immaterial.
- As noted above, stakeholders are collaboratively working toward incremental improvements in the current short-term transfer process to assist access holders to adopt and expedite that process.[819]
- The proposed arrangement appears to require administration of the process to lie with the relevant access holders. Above-rail matters are not part of a declared service; therefore, regulatory oversight would be difficult.

For these reasons, the QCA is not minded to require the inclusion of take-or-pay pooling arrangements in the 2017 DAU. The QCA considers there are too many outstanding issues with the proposal and there is already a mechanism within Aurizon Network’s 2017 DAU to allow for the short-term transfer of access rights which can be utilised to address the same problem identified. The QCA considers that, after having regard to all of the factors in s. 138(2) of the QCA Act, maintaining the take-or-pay provisions as they are in this regard is the most balanced and otherwise appropriate position. It strikes an appropriate balance between incentivising efficiencies in the system and the interests of access holders, access seekers and Aurizon Network (s. 138(2)(b),(e),(h)).

[819] QRC, sub. 29: 2; Aurizon Network, sub. 26: 6–7.

The QCA also notes that Aurizon Network agrees to address take-or-pay pooling arrangements as part of a future DAAU.[820] QRC and Pacific National also supported a review of take-or-pay pooling arrangements during the term of Aurizon Network's 2017 DAU, with QRC also outlining its views on a broader review of take-or-pay arrangements during the UT5 undertaking period.[821] The QCA will of course consider all submissions on the matter afresh if a DAAU is submitted.

9.5 Form of regulation and pricing of overhead power

9.5.1 Aurizon Network's proposal

Aurizon Network's proposal for the form of regulation and the access charge (AT_5) of the overhead power system remains unchanged from the 2016 Undertaking.[822] Despite this, Aurizon Operations submitted a number of concerns with the form of regulation and the pricing of overhead power.[823]

QCA analysis and decision

Summary of decision 9.4

- **The QCA's decision is to approve Aurizon Network's 2017 DAU in respect of the form of regulation and pricing process of the AT_5 component.**

Generally speaking, the AT_5 component of the applicable reference tariffs operates by taking the cost to Aurizon Network of distributing and maintaining the electric system and then averaging those costs out across all electric train operators in that system. Therefore, the more electric train operators using a given system, the lower the AT_5 tariff component for each operator (and vice versa).

Aurizon Operations' views included:

- The current level of cost input relativity between electric and diesel locomotives incentivises the use of diesel over electric locomotives.
- Under the current form of regulation, and because of the incentives to utilise diesel, the increased bypass of the electric system results in increased costs transferred to users of the electric system.
- The cost associated with the access price for the electric system (AT_5) for an individual access holder should not be dependent on the traction choice of other users.
- Because of the above, the AT_5 rate is not representative of an efficient price associated with the costs of use of an individual service.

Aurizon Operations said that there should therefore be an obligation, included in the 2017 DAU, to complete an assessment on the form of regulation and pricing of the overhead power system and implement appropriate reforms no later than 31 December 2017.[824]

[820] Aurizon Network, sub. 26: 4.
[821] Pacific National, sub. 28: 2; sub. 61: 17; QRC, sub. 53: 34–35.
[822] Note this statement excludes any changes in the actual amount of the AT_5 charge but rather refers only to the form and regulation of that charge.
[823] Aurizon Operations, sub. 15.
[824] Aurizon Operations, sub. 15: 3.

Aurizon Network said that the distribution of electricity does not form part of the declared service and that Aurizon Network provides the service (distribution of electricity) at cost.[825] However, Aurizon Network did not otherwise comment on the form of regulation and Aurizon Operations' comments regarding the operation of the AT_5 component.

In any event, Aurizon Operations later stated that it wished to withdraw its initial submission, given concerns that the issue may substantially delay the approval of the 2017 DAU.[826] Aurizon Network also said that it will continue working with stakeholders in relation to AT_5, with an aim to submit a DAAU to the 2016 access undertaking by 31 July 2017 (or sooner).[827]

On 1 December 2017, Aurizon Network submitted its proposed 2017 Electric Traction DAAU that proposed pricing reform for the electric traction component of reference tariffs under the 2016 access undertaking (2017 AT5 DAAU). In August 2018, the QCA released a decision to refuse to approve the 2017 AT5 DAAU and set out the way in which the QCA considers it appropriate to amend the DAAU. In November 2018, Aurizon Network submitted a further draft amending access undertaking on this matter that the QCA is currently considering.

The QCA considers that the request to withdraw the submission by Aurizon Operations and the decision by Aurizon Network to submit a DAAU under the 2016 Undertaking on this issue are matters that are relevant to our decision as to whether this aspect of the 2017 DAU should be approved (s. 138(2)(h)).

On balance, the QCA considers it is appropriate to approve Aurizon Network's 2017 DAU in respect of the form of regulation and pricing process of the AT_5 component, noting Aurizon Network has not proposed any changes to these arrangements under its 2017 DAU.

Aurizon Network and QRC expressed support for this position, while Anglo American asked the QCA to take into account the QRC's submissions made in the 2017 AT5 DAAU (and previous DAAUs on this issue) when assessing the treatment of this issue in UT5.[828]

However, Pacific National said the 2017 DAU, and all of its different elements, should be considered as a single proposal subject to a single process. It expressed concern about the effect of separating out a single pricing element (such as the proposed AT_5 pricing reform) and making a decision on that element in isolation from the other elements of the proposal. Pacific National sought clarity from the QCA as to how any final decision on the 2017 AT5 DAAU may be incorporated into the QCA's decision on the 2017 DAU.[829]

The QCA has formed the view that it is appropriate to approve this aspect of the 2017 DAU. The QCA has considered the factors stated in s. 138(2) and in particular considers that this view achieves an appropriate balance of the objects of Part 5, the legitimate business interests of Aurizon Network, and the interests of access seekers and access holders (s. 138(2)(a), (b), (e) and (h)). It should be noted that our decision on the 2017 DAU is separate to, and does not form part of, the QCA's decision on the 2017 AT5 DAAU. As said in the QCA's final decision on Aurizon Network's 2017 AT5 DAAU:

> The QCA has refused to approve the 2017 AT5 DAAU. If Aurizon Network wishes to have a new or modified version of its AT5 2017 DAAU assessed it will need to submit a further DAAU, which the QCA will then consider.

825 Aurizon Network, sub. 1: 241.
826 Aurizon Operations, sub. 27: 1.
827 Aurizon Network, sub. 26: 4.
828 Aurizon Network, sub. 40: 262; QRC, sub. 53: 35; Anglo American, sub. 57: 12.
829 Pacific National, sub. 61: 18–19.

The QCA has considered the 2017 AT5 DAAU in the context of the terms and conditions contained in the 2016 access undertaking. This means if in the future any measures to change AT5 pricing arrangements were approved, such measures would only apply to the then current access undertaking—and will not automatically have effect in future regulatory periods. Instead, such measures would need to be introduced as part of any review of replacement or future access undertakings, or as a new DAAU once a new undertaking is in place. The QCA would then assess that proposal.

The QCA's assessment of the 2017 AT5 DAAU does not limit the way in which the QCA will consider whether to approve a replacement undertaking or any subsequent DAAUs. The QCA will consider any future proposal on its merits at that time, and take account of any new information or arguments that may arise.[830]

9.6 System forecasts

9.6.1 Aurizon Network proposal

Volume forecasts (Chapter 6) are fundamental to the calculation of allowable revenues and reference tariffs within Aurizon Network's 2017 DAU. Aurizon Network proposed that forecasts for each system are approved and set at the start of each approved undertaking period. The initial forecasts proposed by Aurizon Network are set out in Schedule F for each system respectively. Aurizon Network's 2017 DAU then provides a mechanism to adjust the forecasts (and the resulting tariffs) annually (cl. 4.1) (see section 9.2 for more detail).

QCA analysis and decision

Summary of decision 9.5

- **The QCA considers the appropriate way for Aurizon Network to amend its draft access undertaking is to revise Schedule F to include the QCA's system forecasts for gtks.**

Pacific National said in its submission that Aurizon Network has assumed no growth in setting its volume forecasts.[831] Pacific National also said that it was not consulted by Aurizon Network in relation to the volume forecasts and that the QCA should seek an independent review of Aurizon Network's volume forecasts.[832]

The QCA reviews Aurizon Network's submitted forecasts and also engages experts to undertake an independent review of them. This is an important aspect of the 2017 DAU review and approval process. Moreover, via the revenue adjustment process in cl. 4 of Schedule F, the QCA may only approve revised annual forecasts if it considers that the forecasts submitted by Aurizon Network are reasonable (and any consequential adjustments to tariffs are calculated properly).

The QCA considers it appropriate that Aurizon Network revise Schedule F of the 2017 DAU to include system forecasts (system gtks) consistent with the volume forecasts outlined in Chapter 6. The QCA considers in particular that these amendments strike an appropriate balance between the interests of Aurizon Network, access seekers and access holders (s. 138(2)(b), (e) and (h)).

[830] QCA 2018d: 5.
[831] Pacific National, sub. 19: 11.
[832] Pacific National, sub. 19: 11.

9.7 Reference tariff proposal

Aurizon Network's 2017 DAU proposal

Aurizon Network said its approach to reference tariffs, including tariff structure and calculation methodology, remains unchanged from the method used in its 2016 Undertaking.[833]

QCA analysis and decision

Summary of decision 9.6

- **The QCA's decision is to approve Aurizon Network's 2017 DAU tariff structure and calculation methodology to determine the reference tariff components, although the QCA requires amendments to reflect Aurizon Network's March 2018 submission with respect to:**
  - **(a) WIRP reference tariff allocations; and**
  - **(b) Byerwen GAPE reference tariff.**
- **The QCA considers it appropriate to apply Aurizon Network’s March 2018 pricing approach for WIRP and Byerwen GAPE for the UT5 pricing period. The QCA notes that these particular pricing matters should be considered afresh, including the applicability of all system premiums, as part of future access undertaking pricing assessments.**
- **The QCA considers the appropriate way for Aurizon Network to amend its draft access undertaking is to revise the reference tariffs, by system, based on the proposed allowable revenues and reference tariffs outlined in this decision.**

Aurizon Network did not propose changing the reference tariff structure in Schedule F of its 2017 DAU and stakeholders did not raise any concerns in submissions with Aurizon Network's approach. However, stakeholders raised concerns with Aurizon Network's proposed approach towards WIRP reference tariffs.

The QCA considers the appropriate way for Aurizon Network to amend its 2017 DAU is to revise the reference tariffs, by system, based on the proposed allowable revenues and reference tariffs outlined in this decision in Appendix H. The QCA notes that the allocation of WIRP costs between WIRP users in Aurizon Network's 2017 DAU is different from that used in Aurizon Network's 2016 Undertaking.

For the UT5 pricing period, as a transitional measure, the QCA considers that Aurizon Network’s March 2018 pricing approach for WIRP and Byerwen GAPE are appropriate to apply for the UT5 pricing period. The QCA is concerned that the WIRP pricing and Byerwen GAPE pricing arrangements may not be appropriate beyond the UT5 pricing period and suggests this be a priority for any pricing review process.[834] The QCA considers that future WIRP pricing arrangements should be considered afresh, including the applicability of all system premiums.

9.7.1 Aurizon Network's WIRP reference tariff proposal

Aurizon Network's approach to developing reference tariffs that relate to WIRP infrastructure investments is based on allocating related revenues to identified WIRP users based on WIRP

[833] No smoothing factor has been applied to reference tariffs.
[834] A process which is supported by QRC and Aurizon Network.

pricing groups (see below table).[835] Aurizon Network's proposed pricing allocation methodology is a key driver of the price impact on these users.

Table 89 Aurizon Network's proposed WIRP pricing groups

WIRP Pricing groups	*Description*
WIRP Blackwater	Customers who have contracted Train Services under WIRP arrangements and are geographically located in the Blackwater System (excluding WIRP Rolleston)
WIRP Rolleston	New contracted Rolleston Train Services under WIRP arrangements
Existing Rolleston	Existing Rolleston Train Services (Gladstone Power Station), who have contracted Train Services under WIRP arrangements
WIRP Moura	Customers who have contracted Train Services under WIRP arrangements and are geographically located in the Moura System
WIRP NCL	A customer who has contracted Train Services under WIRP arrangements, originating from the Colton mine to WICET
Existing Blackwater	Customers geographically located in the Blackwater System, who have not contracted Train Services under WIRP arrangements
Existing Moura	Customers geographically located in the Moura System, who have not contracted Train Services under WIRP arrangements

Aurizon Network's WIRP pricing approach is based on the following steps.

- Aurizon Network allocating WIRP capital expenditure amongst the different WIRP pricing groups.
- As Aurizon Network did not propose to continue deferring the recovery of certain WIRP Blackwater revenues, this revenue is proposed to be recovered from different WIRP pricing groups based on WIRP contract positions of WIRP users that are forecast to rail during the UT5 pricing period.
- The deferral relating to WIRP Blackwater is allocated among WIRP Blackwater, WIRP Rolleston and Existing Rolleston subgroups. No allocations have been made to Existing Blackwater users as this subgroup has no WIRP contractual obligations.
- Allocations of the WIRP balloon loop (including previous deferrals relating to WIRP Moura) are made to WIRP Blackwater, WIRP Rolleston and Existing Rolleston subgroups, as they are forecast to rail during the UT5 pricing period.
- The socialisation tests have been applied for WIRP using Aurizon Network's forecast UT5 volumes together with the inclusion of the revenue deferrals to the relevant WIRP pricing groups. This determines whether the system reference tariff applies, or a system premium is applicable.

In principle, Aurizon Network's allocation approach is based on WIRP contract positions to the extent that WIRP users are forecast to rail during the UT5 pricing period.

However, in March 2017, there was uncertainty as to whether Cook Colliery would continue to operate to WICET during the UT5 pricing period as the mine owner Caledon entered into voluntary administration.[836] Following the announcement by Caledon, Aurizon Network

[835] Aurizon Network, sub. 1: 307–311.
[836] PPB Advisory, 2017.

proposed no changes or amendments to its pricing proposal in subsequent correspondence with the QCA. Aurizon Network stated that any volume adjustment should be addressed through the QCA's review of volumes.[837]

As outlined in Chapter 6, based on the information available at the time of this decision, the QCA considers it reasonable to include Cook Colliery railings to WICET in volume forecasts for the UT5 pricing period.[838]

The impact of Aurizon Network's WIRP pricing proposal is that WIRP capital/revenues will be allocated to the remaining WIRP customer groups that are forecast to rail during the UT5 pricing period.

Aurizon Network's approach, 'in-principle', allocated a share of the Blackwater duplications and North Coast Line WIRP segments be allocated to Existing Rolleston. The impact of this approach is shown in Table 90 below.

Table 90 Aurizon Network's 2017 DAU proposed WIRP pricing approach, allocations (%)

Non-electric	***WIRP pricing groups***		
Capital expenditure to be allocated[1]	WIRP Blackwater	WIRP Rolleston	Existing Rolleston
WIRP balloon loop	15.8	64.5	19.7
Blackwater duplications	15.8	64.5	19.7
Bauhinia North		100	
North Coast Line	15.8	64.5	19.7

1. Note: Capex amounts allocated relate only to UT5 non-railers, that is UT4 deferrals and Caledon.

In its March 2018 submission, Aurizon Network proposed an allocation of the deferred WIRP capital costs consistent with the original capital costs allocation for the existing Rolleston customer group as shown in the following table.[839] Aurizon Network noted that existing Rolleston should only receive an allocation of the Balloon Loop cost.

Glencore said that any costs for Blackwater duplications or the North Coast Line should not be allocated to existing Rolleston, which relates to existing capacity held by Rolleston prior to the execution of the WIRP Deed.[840]

Table 91 Aurizon Network's March 2018 submission for allocating deferred WIRP capital (%)[841]

	WIRP Blackwater	***WIRP Rolleston***	***Existing Rolleston***
WIRP balloon loop	15.8	64.5	19.7
Blackwater duplications	19.7	80.3	
Bauhinia North		100	
North Coast Line	19.7	80.3	

[837] Aurizon Network, Response to QCA request for information, 31 May 2017.
[838] The CQCN volume forecasts outlined in Table 28 do not include any railings from Cook Colliery.
[839] Aurizon Network, sub. 40: 25–26.
[840] Glencore, sub. 60: 6.
[841] Aurizon Network, sub. 40: 26.

Glencore submitted that it remained concerned with the 'incremental up, socialise down' methodology, and raised a number of concerns with the amount of additional capacity that WIRP provided and whether it was truly incremental to the capacity of the Blackwater System. Glencore said that Rolleston would bear approximately 85 per cent of the deferred WIRP costs, which it viewed as egregious given the benefits these upgrades provide to the Blackwater and Moura Systems. Glencore said the gtk allocation method inappropriately allocates more cost to the Rolleston Mine, simply as it has the longest haul. Glencore said it was unaware what allocator was used in the final determination (UT4).[842]

Glencore proposed that the allocation of total WIRP capital costs be made on the number of contracted paths over these segments.[843] In relation to Glencore's proposal, the QRC noted that[844]:

- the proposal results in the Rolleston mine paying a significant system premium, which to some extent, is caused by Rolleston bearing the costs of WIRP Blackwater users who are not expected to rail during the UT5 pricing period
- existing Blackwater users will pay lower non-electric charges due the socialisation of WIRP Blackwater, which has lower incremental cost than the existing system reference tariff, with existing Blackwater users
- existing Blackwater users will pay lower electric charges due to the socialisation of WIRP Blackwater and WIRP Rolleston, which have lower incremental costs than the existing system reference tariff, with existing Blackwater users.

The QRC submitted that, as a general rule, existing users should not be required to pay more as a result of an expansion (except to the extent that they receive clear benefits). It noted that system premiums are applied to expanding users, where necessary, to achieve this result.[845]

However, it noted that under the current allocation methodology, system premiums are being applied to Rolleston (non-electric component) to prevent existing users from being worse off, yet those users are actually made better off (in respect of socialisation of Rolleston's incremental electric costs).[846]

Glencore said this results in Rolleston mine paying the maximum tariff on both counts. Glencore submitted that 'cherry picking' rates between non-electric and electric for socialisation unnecessarily penalises any customers failing the socialisation test. Glencore said that once a socialisation test is failed, the entire tariff structure should be stand alone. Glencore requested that the QCA amend the rules around the socialisation test to remove this anomaly.[847]

842 Glencore, sub. 60: 4–6.
843 Glencore, sub. 60: 6.
844 QRC, sub. 53: 3.
845 QRC, sub. 53: 3.
846 QRC, sub. 53: 3.
847 Glencore, sub. 60: 7.

Glencore concerns with WIRP pricing arrangements

Glencore submitted that generally, the determination of which users of a system are incremental, would require an assessment of whether the additional capacity demanded by the user, was incremental to the capacity of the system at the relevant time.

While Glencore acknowledged that it was difficult for them to prove (given that only Aurizon Network is in possession of the necessary information), they were strongly of the view that prior to WIRP investments, the Blackwater System was incapable of delivering the capacity which Aurizon Network claimed. Glencore said to the extent this is the case, the WIRP capacity cannot be regarded as incremental.

Glencore said that even to the extent that the WIRP capacity was truly incremental to the existing system capacity at the time of its construction (and remains truly incremental over time), mainline WIRP capacity is not segregated to the exclusive use of the parties to the WIRP Deed. All system users – including existing users – have the same rights to access train paths irrespective of whether they executed the WIRP Deed or not. Glencore said the cost and capacity risks attaching to the building this incremental capacity have been allocated only to the parties to the WIRP Deed, but those parties do not receive special or exclusive rights to utilise the capacity which they have underwritten. Instead, this capacity is shared on the same basis by all system users, including those who are protected from any of the incremental costs or risk.

Glencore said the effect of the QCA's decisions appears to be that the WIRP Deed signatories are treated as the incremental users of the system, rather than any other customers. Glencore said the parties which signed the WIRP Deed were forced to do so by the necessity to co-ordinate the availability of rail capacity with the availability of the Wiggins Island Coal Export Terminal which they proposed to construct.

Glencore submitted that had it not been for the co-ordination requirement, then each customer could have sought capacity in its own right and would not have formed part of any notional grouping of customers. Further, Glencore proceeded on the basis that some of its existing network capacity was re-purposed to haul to Wiggins Island, and to that extent, it did not demand incremental capacity.

Glencore submitted that it is not within the control of any individual incremental user, whether Aurizon Network requires the capacity – which that incremental user seeks – to be a part of an expansion project which will deliver capacity to multiple parties. The identification of expansion projects relevant to capacity requests is within the control of Aurizon Network and not the access seeker. Any individual access seeker is not in a position to manage the risks which are posed to by any other access seeker. Aurizon Network as the infrastructure owner is in a much better position to manage and control these risks. Glencore submitted that certainly any access seeker is in no better position than any other users of the existing system in managing such risks.

Glencore raised another issue with regard to the impact on WIRP Deed participants, if non-WIRP customers commence railing to WICET (via ad-hoc paths or changed destinations in access agreements). Glencore said to this will result in non-WIRP customers 'free-riding' on WIRP Deed participants. Glencore said that with unused capacity at WICET, there is no doubt that non-WIRP users will begin to ship from there in the near future.

Glencore suggested a 'Balloon Loop' fee or some other 'Conversion Fee' for non-WIRP customers railing to WICET, to the extent that any WIRP customer is paying a premium for WIRP paths. Glencore said these fees should be used to either reduce the premium payable by WIRP customers, or form the basis of a rebate, not unlike those in user funded expansion agreements. Without this type of arrangement, WIRP customers will be locked into paying for this capital for the entire UT5 period, irrespective of any changes in WICET utilisation that may occur over this period.

Source: Glencore, sub. 60: 4–6.

The QRC submitted that an increased allocation of WIRP costs to WIRP Blackwater, capped such that WIRP Blackwater customers continue to pass the socialisation test (and therefore existing Blackwater customers are not made worse off by WIRP) could be considered.[848]

Glencore on the other hand, submitted that it believed there are two methodologies in dealing with the problematic matter of WIRP costs allocation, either of which could be phased in over a period of time:

[848] QRC, sub. 53: 3.

- Allocate a portion of the WIRP costs to each incremental users, based on a robust assessment of what capacity is truly incremental, and applying a consistent methodology to identify incremental users. This should reflect those users' true share of the costs. Glencore said this should be based upon the capacity that was sought by those users. Costs determined in this way should either be deferred for those not yet operating, or added to the RAB. Costs for users which demanded capacity but which have since defaulted, should either be deferred (if there are still reasonable chances of a project commencing) or be socialised across all Blackwater users (or Moura, as applicable).
- Socialise mainline WIRP costs across all Blackwater users (or Moura, as applicable) reflecting the capacity that was added to the system and that is now benefiting all users, and to recover WICET balloon loop costs on a user-pay basis from those using the loop.

The QCA's decision is that it is appropriate for Aurizon Network to amend its 2017 DAU to revise the reference tariff rates, by system, based on the proposed allowable revenues outlined in this decision. Overall, the QCA considers Aurizon Network's March 2018 pricing approach for WIRP is appropriate for the UT5 pricing period. Although the QCA suggests that future WIRP pricing arrangements, should be considered afresh, as well as the applicability of all system premiums.

The QCA's amendments to the reference tariffs that apply to WIRP recognises Aurizon Network's legitimate business interests because they do not adversely affect Aurizon Network's ability to earn revenue that reflects its efficient costs and an appropriate rate of return (s. 138(2)(b) and (g)). Therefore, our amendments to Aurizon Network's 2017 DAU appropriately balance the interests of Aurizon Network and access seekers and access holders under s. 138(2) of the QCA Act.

9.7.2 Aurizon Network's Byerwen reference tariff March 2018 submission

Aurizon Network's 2017 DAU proposed the continuation of deferring the recovery of investments relating to the Northern Missing Link project due to the uncertainty of railings from the Byerwen mine. Aurizon Network stated that once the situation regarding the commencement of railings became clear it would seek to develop a reference tariff for these train services.[849]

Aurizon Network's March 2018 submission noted there was now greater clarity as to forecast volumes expected during the UT5 pricing period in light of the commissioning of the Byerwen rail loop in January 2018. Aurizon Network proposed the Byerwen-related investments to be included in the GAPE System reference tariff from 2017–18.[850]

In taking this approach, Aurizon Network noted that Byerwen would not be liable for the reference tariff component related to Goonyella System Enhancements (GSE), given that Byerwen does not utilise this infrastructure.[851]

The QCA notes that inclusion of Byerwen within the GAPE System for pricing purposes is a significant departure from Aurizon Network's previous approach of seeking to socialise these costs within the Newlands System. While the QCA considers that is should be entitled to recover its rail investment associated with the Byerwen project, the extent to which these investments are socialised within the GAPE System will need to be considered afresh in future pricing arrangements. This is because the QCA will need to assess the applicability of system premiums

[849] Aurizon Network, sub. 1: 131.
[850] Aurizon Network, sub. 40: 27.
[851] Aurizon Network, sub. 40: 27, 53.

for Byerwen train services, which will require an assessment of the forward looking costs and volumes to determine the pricing outcome.

On this basis the QCA considers it appropriate to approve Aurizon Network’s March 2018 pricing approach for Byerwen GAPE for the UT5 pricing period.

The QCA's amendments recognise Aurizon Network's legitimate business interests because they do not adversely affect Aurizon Network's ability to earn revenue from its previous investments (s. 138(2)(b)). The proposed amendments to Aurizon Network's 2017 DAU appropriately balance the interests of Aurizon Network and access seekers and access holders under s. 138(2) of the QCA Act for the UT5 pricing period.

9.7.3 QCA Levy

Aurizon Network's 2017 DAU proposal included forecast indicative QCA Levy for each year of the UT5 pricing period.[852] In its March 2018 submission, Aurizon Network proposed updated QCA Levy components.

Given that Aurizon Network's 2017 DAU arrangements provide appropriate processes by which variations can be proposed by Aurizon Network, including for adjustment charges and endorsed variation events, the QCA considers Aurizon Network's QCA Levy arrangements, as advanced in its March 2018 submission, appropriate to approve.

Aurizon Network has acknowledged that there will be future processes required to address variations that may occur between the reference tariffs ultimately approved for the UT5 pricing period and transitional reference tariffs.

[852] The fees imposed by the QCA on beneficiaries of its regulatory services are levied on a net tonne basis (QCA Levy) for coal-carrying train services as provided for in Schedule F.

10 PART B: DRAFT ACCESS UNDERTAKING PROVISIONS - OVERVIEW

Aurizon Network's 2017 DAU sets out the proposed terms and conditions under which Aurizon Network will provide access to its rail infrastructure that are covered by the undertaking.[853]

Part B of this decision considers Aurizon Network's 2017 DAU provisions including:

- Part 1: Preamble (Chapter 11)—states the high-level context for Aurizon Network's 2017 DAU.
- Part 2: Intent and Scope (Chapter 11)—covers matters relevant to the overall operation of the undertaking. This includes: the term of the undertaking and requirements relating to adjustment charges; the objective of the undertaking and Aurizon Network’s behavioural obligations; obligations in relation to obtaining the Ultimate Holding Company Support Deed (Schedule D); and obligations in relation to the sale and supply of electricity.
- Part 3: Ring-fencing (Chapter 12)—contains Aurizon Network's ring-fencing arrangements. It sets out Aurizon Network’s functional responsibilities within the Aurizon Group; includes provisions intended to promote compliance with Aurizon Network’s relevant statutory obligations under the Transport Infrastructure Act 1994 and the QCA Act; requires that Aurizon Network is managed independently from its related parties; sets out provisions regarding the handling and sharing of confidential information that Aurizon Network may obtain through its dealings with related parties and its customers; and includes processes for handling complaints regarding potential breaches of confidentiality provisions.
- Part 4: Negotiation Framework (Chapter 13)—provides a framework for the negotiation of access rights. It outlines key steps in the negotiation process and the information access seekers and Aurizon Network may be required to provide as part of these negotiations. Related Schedules of Aurizon Network's 2017 DAU include A, B, C, H, and I.
- Part 5: Access Agreements (Chapter 14)—sets out provisions for the development of access agreements, which form the contractual basis for the grant of access rights to the CQCN. Aurizon Network's 2017 DAU also includes a Standard Access Agreement and a Standard Train Operations Deed, which together set out the standard terms on which Aurizon Network will provide access to its network.
- Part 6: Pricing Principles (Chapter 15)—sets out the pricing principles to apply when developing access charges and reference tariffs. These include principles to limit price differentiation between users; principles for setting pricing limits; and principles to apply where there is an expansion of the network. Part 6 requires that the regulatory asset base (RAB) be maintained in accordance with Schedule E of Aurizon Network's 2017 DAU. Part 6 also deals with access conditions that provide a framework for Aurizon Network to mitigate its additional costs or risks in providing access.
- Part 7: Available Capacity Allocation and Management (Chapter 16)—outlines the general principles and procedures for allocating and managing capacity available on the network.

[853] The QCA's decision on Schedule F of Aurizon Network's 2017 DAU are considered within Chapter 9.

The procedures incorporate capacity management processes to renew, resume, relinquish and transfer of capacity.

- Part 7A: Capacity and Supply Chain Management (Chapter 17)—provides a framework for matters relating to Network Management Principles (NMPs), supply chain coordination and capacity assessments. It includes the development, review and application of System Rules, system operating parameters (SOPs), their use and the processes; Aurizon Network's role with regards to coal supply chain coordination and related participation; and processes for capacity assessment. Schedule G sets out the NMP obligations in relation to scheduling, network control and associated services.
- Part 8: Network Development and Expansions (Chapter 18)—establishes principles and procedures for expansions of the CQCN. It provides a sequence of stages for development, from demand assessment to feasibility studies and construction. There is also a framework for funding of expansions by Aurizon Network or by users.
- Part 9: Connecting Private Infrastructure (Chapter 19)—sets out the process for the connection of private infrastructure to the CQCN. Aurizon Network's 2017 DAU also includes a Standard Rail Connection Agreement (SRCA) which sets out standard terms and conditions for connecting private infrastructure. Schedule J of Aurizon Network's 2017 DAU contains the coal loss mitigation provisions (CLMPs).
- Part 10: Reporting, Compliance and Audits (Chapter 20)—sets out the framework for information reporting and demonstrating compliance with the undertaking. This includes annual and quarterly reporting requirements; provisions to demonstrate Aurizon Network’s compliance with the undertaking; and audit requirements.
- Part 11: Dispute Resolution and Decision Making (Chapter 21)—establishes a dispute resolution mechanism and sets out the requirements to apply to the resolution and determination of certain categories of disputes.

Summary of key changes from draft decision

The QCA has refined and developed its views on Aurizon Network's 2017 DAU provisions since it released its draft decision, reflecting stakeholder comments, new information and the outcomes of other regulatory processes. Key changes from the draft decision include:

- additional amendments to Aurizon Network's 2017 DAU provisions that:
  - require Aurizon Network to use actual inflation (not forecast inflation) for the roll-forward of the RAB (Chapters 4 and 15)
  - require Aurizon Network to participate in the development of supply chain productivity improvement initiatives, where reasonable to do so (Chapter 17)
  - require Aurizon Network to use reasonable endeavours to minimise disruption to train services when planning and implementing operational constraints on the network (Chapter 17) and provide additional information about train services that have been disrupted as a result of Aurizon Network imposing operational constraints (Chapter 20)
  - prevent Aurizon Network from recovering revenue through the revenue cap that it could have earned, but did not because of it has failed to meet its obligations to minimise disruption to train services (Chapter 9)
  - require Aurizon Network to negotiate non-price terms sought by access seekers 'in good faith' (Chapter 18)

- revisions to amendments proposed in the draft decision that:
  - clarify how disputes in relation to the negotiation of the terms of an Access Agreement and Train Operations Deed are to be determined (Chapter 14)
  - clarify that disputes about capacity deficits will be resolved in accordance with Part 11, except disputes about a decision by Aurizon Network not to fund an expansion (Chapter 17)
  - require the QCA to not be inconsistent with Aurizon Network's safety management system when making decisions about particular types of disputes (Chapter 21)
- no longer requiring Aurizon Network to include provisions:
  - for a baseline capacity review, on the basis that this process has been completed under its 2016 Undertaking (Chapter 17)
  - for the development and review of a SUFA, on the basis that the development of standard agreements to underpin user funding framework is not required in the UT5 undertaking (Chapter 18).
  - for feasibility funders to adopt user funding for an expansion even where Aurizon Network provides notice of its willingness to fund that expansion on regulatory terms, on the basis that an obligation to negotiate in good faith will promote an equitable negotiation process for non-price terms which may be sought by access seekers (Chapter 18)
  - for access seekers to hold Aurizon Network accountable for capacity shortfalls resulting from an Aurizon Network default or negligent act, on the basis that relevant parties are able to negotiate such terms as part of an Aurizon Network expansion (Chapter 18).

11 PREAMBLE, AND INTENT AND SCOPE

11.1 Aurizon Network's 2017 DAU proposal (Part 1)

Part 1 of the 2017 DAU states the high-level context for Aurizon Network's 2017 DAU, including:

- Aurizon Network is part of the Aurizon Group, which is responsible for managing and maintaining the rail infrastructure and access to it.
- The UT5 undertaking, when ultimately approved by the QCA, will govern the negotiation and provision of 'access' (as defined under the 2017 DAU) by Aurizon Network.
- Aurizon Network developed the proposed UT5 undertaking in accordance with s. 136 of the QCA Act.

QCA analysis and decision

Summary of decision 11.1

- **The QCA's decision is that Part 1 (Preamble) of Aurizon Network's 2017 DAU be amended to reflect the statutory circumstances in which the UT5 undertaking was submitted and is to be approved.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in the Amended 2017 DAU at Appendix H.**

Aurizon Network's development of the 2017 DAU

Aurizon Network's 2017 DAU was submitted in response to an initial undertaking notice that required Aurizon Network to give the QCA a draft access undertaking under s. 133 of the QCA Act. It was not submitted in accordance with s. 136 of the QCA Act, and therefore cannot be approved under that section of the QCA Act.

The QCA considers that cl. 1.4 of Aurizon Network's 2017 DAU should be amended to reflect the circumstances in which it was submitted prior to its approval. This amendment is supported by Aurizon Network.[854]

11.2 Aurizon Network's 2017 DAU proposal (Part 2)

Part 2 of the 2017 DAU covers the following matters, which are relevant to the overall operation of Aurizon Network's proposed UT5 undertaking:

- the term of the undertaking and requirements relating to the calculation and payment of adjustment charges (cl. 2.1)
- the objective of the undertaking (cl. 2.2) and Aurizon Network's behavioural obligations (cl. 2.3)
- the scope of the undertaking (cl. 2.4), which provides that the UT5 undertaking will only apply to the negotiation and provision of access
- Aurizon Network's obligations in relation to obtaining, or failing to obtain, the Ultimate Holding Company Support Deed from Aurizon Holdings (cl. 2.5)

[854] Aurizon Network, sub. 40: 267–268.

- Aurizon Network's obligations in relation to the sale and supply of electricity (cl. 2.6).

Aurizon Network's 2017 DAU proposals in Part 2 are broadly consistent with its 2016 Undertaking, aside from the proposed definition of the terminating date of the UT5 undertaking.

Key issues identified during the QCA's investigation

The QCA has considered all elements of Part 2 of Aurizon Network’s 2017 DAU proposal in making this decision. The following issues attracted comment from stakeholders or have been identified for further consideration:

- the term of the undertaking and requirements relating to adjustment charges (section 11.3)
- provisions covering the objective of the undertaking and Aurizon Network's behavioural obligations (section 11.4)
- provisions covering the scope of the undertaking (section 11.5)
- provisions relating to the Ultimate Holding Company Support Deed (section 11.6)
- Aurizon Network's obligations regarding the sale and supply of electricity (section 11.7).

11.3 Term of the undertaking and adjustment charges

Aurizon Network's proposal

Clause 2.1 covers the term of the UT5 undertaking and requirements relating to the calculation and payment of adjustment charges.

Aurizon Network proposed that the UT5 undertaking will apply from the date of its approval by the QCA until the earlier of:

- 30 June 2021
- the date on which the service to which the undertaking relates, ceases to be a declared service for the purposes of Part 5 of the QCA Act
- the date the undertaking is withdrawn in accordance with the QCA Act.

Aurizon Network also proposed that adjustment charges will be calculated for the period between 1 July 2015 and the date the UT5 undertaking is approved.[855]

[855] Schedule F of the 2017 DAU contains the requirements relating to the calculation and payment of adjustment charges (Chapter 9).

QCA analysis and decision

Summary of decision 11.2

- **The QCA's decision is that the arrangements in respect of the term and adjustment charges in Aurizon Network's 2017 DAU be amended to:**
  - **(a) revise the proposed definition of the 'Terminating Date' so that it is clear that the UT5 undertaking will continue to apply if the Minister makes a new declaration in relation to all, or part, of the relevant service**
  - **(b) include a new cl. 12.5 to address the potential situation whereby references in Aurizon Network's 2017 DAU to the phrase 'service taken to be declared under s. 250(1)(a) of the Act' may not be accurate if a new declaration in respect of the service is made by the Minister under Part 5 of the QCA Act**
  - **(c) revise the proposed definition of 'Adjustment Date' to reflect the commencement of the UT5 pricing term (that is, 1 July 2017).**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in the Amended 2017 DAU at Appendix H.**

Terminating date

The QCA understands that Aurizon Network's proposed definition of 'Terminating Date' is intended to mean that the UT5 undertaking applies to the extent that the service, or part thereof, is a declared service under the QCA Act. Otherwise, the UT5 undertaking would apply until 30 June 2021, unless withdrawn in accordance with the QCA Act.

Aurizon Network said that the rationale for including the alternative basis for termination of the UT5 undertaking is to ensure consistency with the timeframe of, or continuation of, any applicable declaration or replacement declaration, as the existing declaration of the declared service will expire in September 2020.[856] The QRC agreed with Aurizon Network's reasoning for the proposed definition.[857]

The QCA considers that it is appropriate that an undertaking provides for expiration in the event that the relevant service is no longer a declared service. The proposed definition removes any uncertainty as to whether or not the UT5 undertaking would automatically cease to apply on the date the service ceases to be declared, as termination in these circumstances is proposed to be made explicit. This is in the interests of Aurizon Network, users and persons who may seek access to the service.

However, the QCA considers that the proposed definition should be amended to permit the continuation of the UT5 undertaking if the Minister makes a new declaration in relation to all or part of the relevant service. In circumstances where only part of the relevant service is declared, the QCA considers it appropriate that only those parts of the UT5 undertaking that are relevant to the declared part of the service should continue to operate.

The QCA considers the proposed drafting does not clearly address the circumstances where s. 250(1)(a) of the QCA Act ceases to operate and a new declaration in respect of the service is made by the Minister under Part 5 of the QCA Act.[858] The QCA considers that it is in the

[856] Aurizon Network, sub. 1, Appendix P-1: 25.
[857] QRC, sub. 20, Annexure 1: 25.
[858] The process under Part 5, Division 2, Subdivision 4 and 4A of the QCA Act involves the Minister making a new declaration.

interests of all parties for the drafting to clearly provide for the continuation of the UT5 undertaking in circumstances where a new declaration is made (ss. 138(2)(b), (d), (e) and (h) of the QCA Act).

The QCA notes that pursuant to s. 84 of the QCA Act, the Minister may make a new declaration relating to the relevant service, or declare part of the service that is itself a service, whereas Aurizon Network's 2017 DAU is directly linked to s. 250(1)(a) of the QCA Act in a number of instances. This discrepancy may cause unforeseen issues with the operation of the UT5 undertaking.

In considering appropriate drafting, the QCA has considered the current provisions of the QCA Act and accounted for the circumstances where a new declaration, if any, would start from expiry of the service currently taken to be declared. Whilst not seeking to limit the discretion of the Minister, the QCA believes this is a reasonable position to take at this time.

For the above reasons, the QCA considers that it is not appropriate to approve Aurizon Network's definition of Terminating Date in the 2017 DAU. The amendments to the definition of Terminating Date that the QCA considers appropriate are set out in Appendix H.

Moreover, references in the 2017 DAU that refer to the 'service taken to be declared under s. 250(1)(a)' may not be appropriate if a new declaration is made under a different provision of the QCA Act.[859] Therefore, the QCA considers that it is appropriate to amend Aurizon Network's 2017 DAU to include a new cl. 12.5 that refers to any declaration by the Minister under Part 5 of the QCA Act. Aurizon Network and QRC have expressed support for these amendments.[860]

Adjustment date

Aurizon Network has proposed the definition of 'Adjustment Date', the date on which any adjustments to access charges are required to be applied due to differences in the approved UT5 undertaking reference tariffs and transitional reference tariffs, to be 1 July 2015.

The QCA does not consider it appropriate in these circumstances that there should be amounts payable under the UT5 undertaking that are calculated by reference to a time before the date on which the UT5 regulatory pricing period was proposed to commence.[861] It is appropriate that there is a mechanism to make adjustments in access charges to account for any lag between the UT5 undertaking approval date and the intended commencement of the UT5 regulatory period.

The QCA considers that it is in the legitimate business interests of Aurizon Network, the interests of access seekers and holders, and the public interest (s. 138(2)(b), (d), (e) and (h) of the QCA Act) that the date from which adjustments are calculated should reflect the intended commencement date of the UT5 regulatory pricing period. This date should be 1 July 2017. Aurizon Network supported this amendment in its submission[862] and the QCA assumes the retention of the 1 July 2015 in Aurizon Network's mark up of the 2017 DAU[863] date may have been an oversight. This amendment was also not opposed in other stakeholder submissions and stakeholders clearly have an expectation that the adjustment and reconciliation process will take place by reference to a 1 July 2017 adjustment date. This expectation is based on statements made by Aurizon Network in its submissions, both in the UT5 process and in

[859] This phrase appears throughout the 2017 DAU (for example, cls. 2.2(a), 2.2(b) and 2.4(a)).
[860] Aurizon Network, sub. 40: 267–268; QRC, sub. 53: 40.
[861] This being the period commencing from 1 July 2017.
[862] Aurizon Network, sub. 40: 267–268.
[863] Aurizon Network, sub. 48: 243.

Extension DAAUs to extend the operation of the 2016 Undertaking until a replacement UT5 undertaking comes into effect, that a full reconciliation and true-up process would take place.[864]

11.4 Objective of the undertaking and behavioural obligations

Aurizon Network's proposal

Clauses 2.2 and 2.3 of Aurizon Network's 2017 DAU cover the objective of the UT5 undertaking and Aurizon Network's behavioural obligations.

Aurizon Network's proposed objective includes (cl. 2.2):

- facilitating the negotiation of access agreements between Aurizon Network and access seekers
- ensuring the declared service is provided in a manner that does not unfairly differentiate in a material way between access seekers and/or access holders
- preventing Aurizon Network from recovering, through the price of access to the declared service, any costs that are not reasonably attributable to the provision of that service.

Aurizon Network also proposed a list of behavioural obligations it would be required to comply with when negotiating and providing access (cl. 2.3(a)–(f)). These obligations include:

- taking certain actions to demonstrate compliance with the unfair differentiation obligations under ss. 100(2)–(4) and 168C of the QCA Act
- not engaging in conduct for the purpose of preventing or hindering an access seeker's access to the declared service within the meaning of s. 104 or s. 125 of the QCA Act
- not engaging in conduct that results in anti-competitive cost shifting, anti-competitive cross-subsidies, or anti-competitive price or margin squeezing.

There are provisions for access seekers and access holders to lodge a complaint if they consider Aurizon Network has failed to comply with these behavioural obligations (cl. 2.3(g)–(k)).

QCA analysis and decision

Summary of decision 11.3

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of the objective of the UT5 undertaking and Aurizon Network's behavioural obligations (cls. 2.2 and 2.3).**

Pacific National supported the ongoing inclusion of behavioural obligations in cl. 2.3 of Aurizon Network's 2017 DAU, as they assist in avoiding inefficient and anti-competitive behaviour.[865]

The QCA considers that the provisions proposed by Aurizon Network are appropriate. The QCA Act requires provisions of this nature to be included in an undertaking.[866]

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[864] For example, Aurizon Network 2017k: 5; 2017e: 6; 2018a: 3–4. See also, QCA 2018c: 2–3.
[865] Pacific National, sub. 19: 5.
[866] See, for example, s. 137 of the QCA Act.

11.5 Scope of the undertaking

Aurizon Network's proposal

Clause 2.4 of Aurizon Network's 2017 DAU covers the scope of the UT5 undertaking. Aurizon Network proposed that the UT5 undertaking will only apply to the negotiation and provision of access, including all aspects of access to the declared service (cl. 2.4(a)). The clause also deals with matters relating to the responsibilities of Aurizon Network and other parties to obtain legal rights to access land, and limitations on the applicability of the UT5 undertaking when it conflicts with other legal instruments (cl. 2.4(b)–(g)).

QCA analysis and decision

Summary of decision 11.4

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of the scope of the 2017 DAU (cl. 2.4), subject to the QCA's decision with respect to the term of the undertaking.**

Subject to the QCA's proposed amendments outlined in section 11.3, the QCA considers that the provisions proposed by Aurizon Network are appropriate. In particular, the QCA considers Aurizon Network's cl. 2.4(a) is appropriate, as it permits the UT5 undertaking to deal with the declared service, in the event that this differs from the definition of 'Access' provided in the 2017 DAU.

11.6 Ultimate Holding Company Support Deed

Aurizon Network's proposal

Clause 2.5 of Aurizon Network's 2017 DAU specifies Aurizon Network's obligations in relation to obtaining the Ultimate Holding Company Support Deed (support deed) from Aurizon Holdings.

Aurizon Network has proposed in the terms of its support deed (Schedule D to the 2017 DAU) that Aurizon Holdings agree to provide support to Aurizon Network to enable Aurizon Network to comply with the UT5 undertaking, as well as to protect confidential information[867] received from Aurizon Network in accordance with the requirements of the UT5 undertaking.

Aurizon Network has proposed that if:

- Aurizon Network fails to obtain the support deed in the form set out in Schedule D,
- the support deed is not maintained in force, or
- the requirements of the support deed are not complied with,

then Aurizon Network will conduct quarterly audits of the confidential information register, and half-yearly training sessions for high-risk personnel on Aurizon Network's obligations under the QCA Act and Part 3 of the 2017 DAU. It is proposed that these additional obligations apply until the relevant matter is rectified. Similarly, under the support deed itself, the consequences for breaching the support deed are limited to those outlined in cl. 2.5 of the 2017 DAU.

[867] Aurizon Network's obligations in relation to confidential information are discussed in Chapter 12.

QCA analysis and decision

Summary of decision 11.5

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in relation to obtaining, maintaining and complying with the proposed the Ultimate Holding Company Support Deed (support deed) and the proposed terms of the support deed (cl. 2.5 and Schedule D).**

Pacific National said the consequences that apply to Aurizon Holdings for breaching the support deed are weak and unlikely to act as a deterrent.[868]

The QCA considers that the relevant provisions of the 2017 DAU and the proposed support deed itself set out appropriate remedies. The remedies proposed by Aurizon Network, for example, require regular audits of the confidential information register and increased training requirements. These impose a level of responsibility on Aurizon Network (while not hindering information flows) and also incentivise Aurizon Network to procure the execution of the support deed.

In response to Pacific National's request to impose liability on Aurizon Holdings for consequential losses, the QCA does not consider it necessary to strengthen the provisions of cl. 2.5. While neither the QCA nor Aurizon Network can compel Aurizon Holdings to execute the proposed support deed, it is noted that similar deeds have been executed in the past without issue or concern. In the event the QCA becomes concerned the support deed had not been executed in the past, or was not proposed to be executed in the future, then such obligations could warrant further consideration.

The QCA considers that cl. 2.5 of the 2017 DAU and the associated support deed (Schedule D) are appropriate. The 2017 DAU provisions and support deed strike a balance between the interests of Aurizon Network, access holders and access seekers (ss. 138(2)(b), (d), (e) and (h) of the QCA Act).

11.7 Sale and supply of electricity

Aurizon Network's proposal

Clause 2.6 of Aurizon Network's 2017 DAU covers Aurizon Network's proposed obligations regarding the sale and supply of electricity. Aurizon Network has proposed that it be prevented from refusing to supply electricity to a third party access seeker or access holder if it supplies electricity to a related operator (cl. 2.6(a)).

Disputes about Aurizon Network's refusal to sell or supply electricity or about the terms of supply can be resolved in accordance with the dispute resolution mechanism in Part 11 (cl. 2.6(c)). However, Aurizon Network cannot be obliged to sell or supply electricity on unreasonable or uncommercial terms, or if it is not legally able to do so (cl. 2.6(b)).

[868] Pacific National, sub. 19: 19; sub. 61: 16–18.

QCA analysis and decision

Summary of decision 11.6

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposed obligations regarding the sale and supply of electricity (cl. 2.6).**

The provisions in relation to the supply and sale of electricity are unchanged from Aurizon Network's 2016 Undertaking.

The QCA notes Aurizon Network's contention that the supply and sale of electricity does not form part of the declared service.[869] In any event, the QCA is required to consider the appropriateness of the provisions as submitted in accordance with the QCA Act. And, after reviewing Aurizon Network's proposal on this matter, the provisions are considered appropriate.

The QCA considers that the 2017 DAU provides adequate protection for third party operators in respect of the supply and sale of electricity and Aurizon Network is incentivised to continue to supply electricity for access holders to utilise in the CQCN.

[869] Aurizon Network, sub. 1: 241.

12 RING-FENCING

12.1 Aurizon Network's 2017 DAU proposal

Part 3 of the 2017 DAU contains the ring-fencing arrangements that Aurizon Network, being a related access provider[870], has proposed. Part 3 of the 2017 DAU also outlines Aurizon Network's statutory obligations under the *Transport Infrastructure Act 1994* and the QCA Act that relate to its monopoly and vertically integrated structure.[871]

The proposed ring-fencing framework in the 2017 DAU includes provisions for:

- compliance declarations and reporting (cl. 3.3)
- functional separation (cls. 3.4 and 3.5)
- employee separation (cl. 3.6)
- accounting separation (cl. 3.7)
- management structure and separation (cl. 3.8)
- control and disclosure of confidential information (cls. 3.9–3.19)
- complaint handling procedures (cl. 3.20)
- responsibility for rail infrastructure—line diagrams (cl. 3.21).

12.2 General provisions and Aurizon Network's functional responsibilities—Sections A and B

Section A of Part 3 sets out the organisational structure of the Aurizon Group and the purpose of this part of the 2017 DAU. Section A also includes provisions intended to promote compliance with Aurizon Network's relevant statutory obligations under the *Transport Infrastructure Act 1994* and the QCA Act.

Aurizon Network proposed to submit, as part of its reporting obligations under Part 10, a declaration of compliance with its ring-fencing provisions for the preceding 12 months, including details of any breaches (cl. 3.3).

Section B outlines Aurizon Network's functional responsibilities within the Aurizon Group and the below-rail services it provides. Under cl. 3.4, Aurizon Network must not undertake any above-rail services, except for providing declared services or providing services in respect of private infrastructure (cl. 3.4(d)).

As part of its reporting obligations under Part 10, Aurizon Network must also advise the QCA if it acquires an interest in any port, mine, or coal extraction project connected to the CQCN, and if it provides any services associated with the loading of vessels at a port connected to the CQCN (cl. 3.4(e)).

[870] As defined in Schedule 2 of the QCA Act.

[871] For example, s. 438H of the *Transport Infrastructure Act 1994* requires Aurizon Network to maintain an independent board of directors, which supervises arm's-length dealings in respect of access between Aurizon Network and any related operators. Additionally, s. 137(1A) of the QCA Act requires that provisions to protect against unfair differentiation are included in an undertaking.

Other key elements of Section B include:

- restrictions on Aurizon Network transferring, delegating or contracting out the provision of below-rail services on the CQCN to any related operator (cl. 3.5)
- restrictions on sharing staff between Aurizon Network and its related parties, and the control of staff access to confidential information (cl. 3.6)
- requirements for accounting separation between the supply of declared services and other business functions, and requirements regarding the preparation of financial statements (cl. 3.7).

12.3 Management of Aurizon Network—Section C

Section C requires that Aurizon Network is managed independently from its related parties. It also requires that related parties are not involved in the appointment or supervision of the executive management of Aurizon Network (cl. 3.8(a)).

Clause 3.8(c) also restricts Aurizon Network from acting on directions from related parties with regard to the granting of access or exercise of access rights, for the benefit of a related operator or another third party.

12.4 Confidential information—Section D

Section D sets out provisions regarding the handling and sharing of confidential information that Aurizon Network may obtain through its dealings with related parties and its customers. Key provisions proposed by Aurizon Network include:

- Aurizon Network must not request, require or agree to the exclusion or waiver of any provision of Part 3 during access negotiations. However, a voluntary agreement may impose ring-fencing standards that are more stringent than the Part 3 requirements (cl. 3.9).
- During access negotiations, either party to the negotiation may require the other party to enter into a confidentiality agreement (cl. 3.10).
- Aurizon Network must keep confidential information secure and not disclose it, unless the disclosure is in accordance with the undertaking. Aurizon Network must not use or disclose confidential information in a way that breaches its obligations under any of ss. 100, 104, 125 or 168C of the QCA Act (cl. 3.11).
- Aurizon Network must follow detailed processes for the disclosure of confidential information, where permitted (cls. 3.12–3.13).
- Aurizon Network must maintain a 'Confidential Information Register' of people who have had access to confidential information (cl. 3.14). Aurizon Network must also maintain a 'High-risk Personnel Register' (cl. 3.16) of people in a position to access and use confidential information for purposes other than providing below-rail services, or to influence decisions of other Aurizon Group companies (for example, Aurizon Network's Executive Officer and Chief Financial Officer).
- Relevant staff of Aurizon Network and the Aurizon Group must receive mandatory training in confidential information handling and ring-fencing obligations (cl. 3.15).
- Upon ending their employment with Aurizon Network, staff who have had access to confidential information are to be de-briefed and reminded of their ongoing obligations (cl. 3.17).

- Adequate measures must be in place to maintain the security of confidential information (cl. 3.18).
- Aurizon Network must adhere to defined procedures for making and documenting decisions that adversely affect the rights of a customer under the UT5 undertaking (cl. 3.19).

Aurizon Network's proposed drafting of cl. 3.14(b) removes any direct QCA role in approving the structure and detail of the Confidential Information Register, if the QCA has already approved a format for the register under the 2016 Undertaking.[872]

12.5 Complaint handling—Section E

Section E sets out the proposed processes for handling complaints regarding potential breaches of Aurizon Network's obligations under Part 3 or the support deed (Schedule D); and potential breaches of confidentiality provisions in other agreements that Aurizon Network has with its customers.

Where a party considers that Aurizon Network has breached its obligations, it may lodge a complaint with Aurizon Network, which must then be investigated (cl. 3.20(a)). Where complainants are not satisfied with the outcome of Aurizon Network's investigation, they may apply to the QCA for an audit of the matter (cl. 3.20(e)).

12.6 Responsibility for rail infrastructure—Section F

Section F includes provisions that require Aurizon Network to maintain line diagrams indicating the parts of the rail network that are used in providing declared services. Line diagrams depict the boundaries of the CQCN, and therefore the assets that are subject to the UT5 undertaking.

Line diagrams must be updated and published at least every six months to reflect any changes that have been made to the configuration or ownership of the CQCN rail assets (cl. 3.21(b)).

If Aurizon Network transfers ownership of any part of the CQCN to a related party, or part of the rail infrastructure is removed, the undertaking ceases to apply to those assets (cl. 3.21(c)).

Section F allows access seekers, access holders or the QCA to request amendments to the line diagrams if it is suspected they are inaccurate (cls. 3.21(d)–(f)).

QCA analysis and decision

Summary of decision 12.1

- **The QCA's decision is to approve Part 3 of Aurizon Network's 2017 DAU.**

Aurizon Network is part of a vertically integrated group of companies, which includes the dominant supplier of above-rail services in the CQCN. For this reason, a ring-fencing framework is necessary so that Aurizon Network cannot use its position or confidential information to favour its related parties, to the detriment of competition in upstream or downstream markets.

The QCA received a number of submissions on Part 3. The QRC accepted cl. 3.14(b) as proposed by Aurizon Network, which removes any direct QCA role in approving the structure and detail of

[872] The QCA approved Aurizon Network's proposed structure and level of detail of the Confidential Information Register, pursuant to clause 3.14 of the 2016 Undertaking, on 16 June 2017.

the Confidential Information Register, if the QCA has already approved a format for the register under the 2016 Undertaking.[873]

Pacific National supported the continued inclusion of ring-fencing provisions. However, it submitted that provisions regarding management separation, and treatment of confidential information ought to be strengthened.[874] The QRC supported Pacific National's view and expressed concern that the ring-fencing arrangements are not providing a fair and level playing field.[875]

Pacific National said that strengthening the management separation obligations of Part 3 to increase the independence and separation of the Aurizon Network board and management would:

> provide more effective governance in relation to the separation and ring fencing of Aurizon Network from Aurizon Holdings.[876]

Pacific National also expressed concern that the current confidentiality and ring-fencing provisions may not be sufficient to protect confidential information. Pacific National requested that extra protection be established to ensure this information cannot be used by Aurizon's above-rail operations.[877] Specifically, Pacific National said:

> in relation to section 3.13 (c) Pacific National believes that Aurizon Network[s] disclosure of confidential information to a third party should be on terms which are enforceable by the owner of the confidential information.
>
> …
>
> in relation to section 3.13 (h) Pacific National believes that the wording contained in the 2017 DAU allows Aurizon Network to disclose confidential information to Aurizon Network's related operator's employees involved in corporate governance, accounting, taxation, risk assessment, financing and similar functions. Pacific National is concerned that given this broad exemption the employees of Aurizon Network's related operator may receive this confidential information regardless of whether they are required to have the information to perform their activities.[878]

Pacific National expressed concern that a number of recent ring-fencing breaches, which involved the disclosure of Pacific National's confidential information, were indicative of systemic flaws in Aurizon Network's compliance system; it therefore asked that the QCA consider strengthening the ring-fencing framework and also consider its approach to broader monitoring and auditing functions, including ring-fencing compliance.[879]

Pacific National submitted that provisions relating to the transfer of information between Aurizon Group entities, and the disclosure of confidential information, should be subject to annual compliance audits.[880]

The QRC submitted that the proposed ring-fencing provisions are not adequate, nor appropriate to approve.[881] The QRC also questioned the effectiveness of the ring-fencing audits undertaken by the QCA. The QRC said:

[873] QRC, sub. 20, Annexure 1: 1.
[874] Pacific National, sub. 19: 5; Pacific National, sub. 61: 16–17.
[875] QRC, sub. 53: 40.
[876] Pacific National, sub. 19: 5.
[877] Pacific National, sub. 19: 16; Pacific National sub. 61: 16–17.
[878] Pacific National, sub. 19: 21.
[879] Pacific National, sub. 61: 16–17, 19.
[880] Pacific National, sub. 61: 19.
[881] QRC, sub. 53: 40.

> While the audits undertaken by the QCA provide a degree of comfort, it is not our sense that those audits can be completely effective. In the QRC's view the test for considering whether the ring-fencing provisions are appropriate should not be whether breaches of the ringfencing provisions have been identified. The appropriate question should be are these arrangements providing a fair and level playing field?[882]

The QRC submitted that current circumstances favour creating more robust ring-fencing provisions in order to provide the confidence necessary to ensure there is a level playing field.[883]

Aurizon Network noted that the Part 3 framework was considered at length during the UT4 process, and that additional ring-fencing measures were implemented. Aurizon Network said that the current arrangements should stay in place for longer to permit an informed assessment of these controls, before considering further change.[884] Aurizon Network supported the draft decision to accept the proposed Part 3 provisions.

The QCA considers that it is not necessary to strengthen the ring-fencing provisions in the way suggested by Pacific National and the QRC. Aurizon Network has complied with its obligations by reporting breaches and has identified actions to minimise the risk of such breaches occurring in the future. Notwithstanding recent instances of non-compliance, the QCA is not convinced that the specific issues raised—when considered in the context of the Part 3 framework as a whole—are sufficient to render the proposed ring-fencing arrangements inappropriate.

In the QCA's view, while the ring-fencing framework should present sufficient incentives to encourage compliance, it primarily serves as a 'report and rectify' framework. Non-compliance does not necessarily indicate a flawed or inadequate ring-fencing framework. The recent instances of non-compliance appear to the QCA to be the result of weaknesses in Aurizon Network's internal compliance systems, rather than a systemic failure of those systems, or the ring-fencing framework itself.

In cases such as these, the ring-fencing framework serves its purpose when weaknesses in compliance systems are identified and improvements are made to prevent, or at least minimise, the occurrence of further breaches. As compliance hinges on Aurizon Network maintaining effective systems and procedures, stronger ring-fencing obligations do not guarantee fewer instances of non-compliance.

While the recent ring-fencing breaches are of concern to the QCA, they are also of concern to Aurizon Network. Aurizon Network has already taken action to prevent further occurrences. These measures include appointing an independent consultant to identify potential improvements to systems and processes to prevent similar incidents. This review was completed in October 2018 and, although it did not reveal any significant deficiencies in Aurizon Network's information control systems and practices, it did identify a number of options that could be adopted to improve existing information control measures. Aurizon Network has undertaken to consider these options, and has already commenced implementing some of these measures. The QCA intends to monitor this process and will welcome Aurizon Network's timely implementation of relevant recommendations, where appropriate.

Relevantly, Aurizon Network's procedures for handling confidential information formed an important part of the 2017–18 compliance audit under cl. 10.6 of the 2016 Undertaking, which

[882] QRC, sub. 53: 40.
[883] QRC, sub. 53: 40.
[884] Aurizon Network, sub. 26: 8.

was completed in October 2018. This audit did not identify any significant issues of concern, and noted that a number of issues raised in the 2016–17 audit had been resolved.

While the QCA notes Pacific National's view that the QCA should consider amending Aurizon Network's 2017 DAU in light of recommendations arising from the consultant's review,[885] it is the QCA's view that Aurizon Network is taking reasonable action to prevent further breaches of this nature. Nonetheless, any further non-compliance will be investigated, at which point the QCA will consider all options available to it.

After having regard to each of the factors in s. 138(2) of the QCA Act, the QCA considers it is appropriate to approve Aurizon Network's 2017 DAU Part 3. In particular:

- The object of Part 5 of the QCA Act (s. 138(2)(a))—the QCA's assessment is that the provisions proposed in Part 3 appropriately seek to limit the ability of Aurizon Network to take advantage of its position and information available to it to favour its related parties, promoting the economically efficient operation of, use of and investment in significant infrastructure by which services are provided, with the effect of promoting effective competition in upstream and downstream markets. The QCA has not been provided with evidence that the existing ring-fencing arrangements are ineffective or otherwise deficient in preventing the misuse of Aurizon Network's monopoly power for its own benefit, or the benefit of its related parties, or to the detriment of other market participants.
- Whether the proposed provisions in Part 3 provide an appropriate balance between the legitimate business interests of Aurizon Network and the interests of access seekers and access holders (ss. 138(2)(b), (e) and (h))—the QCA's assessment is that the proposed provisions strike the right balance between ensuring Aurizon Network does not use its position or confidential information to favour its related parties (in the interests of access seekers and access holders) and imposing obligations that are too onerous and/or costly to comply with. The QCA is not satisfied that the benefits of more rigorous ring-fencing provisions would materially outweigh any incremental compliance costs, which are ultimately passed through to access holders.
- Whether the provisions are in the public interest, in particular in having competition in markets (s. 138(2)(d))—the proposed provisions advance the public interest, as they provide a framework to mitigate against behaviour likely to adversely affect competition in upstream and downstream markets. The QCA has not been provided with evidence that revising the ring-fencing arrangements is likely to deliver materially better outcomes and protections.
- The pricing principles set out in s. 168A of the QCA Act—in particular, it is considered that the provisions are appropriate, as they seek to address circumstances where the access provider sets terms and conditions that discriminate in favour of downstream operations of the access provider or a related body corporate of the access provider (ss. 138(2)(g) and 168A(c)).

The QCA will continue to monitor Aurizon Network's compliance with its obligations under Part 3 through annual compliance reporting (cl. 10.5.2), breach reporting (cl. 10.5.3) and annual ring-fencing audits (cl. 10.6.2).

Clause 3.20 of the 2017 DAU also provides a framework for Aurizon Network customers to raise complaints about suspected breaches by Aurizon Network of its Part 3 obligations, and to

[885] Pacific National, sub. 61: 19.

escalate these matters to the QCA if necessary. If the Part 3 provisions are deficient in any way, these processes will likely reveal these deficiencies.

The QCA considers it appropriate to approve Part 3 of the 2017 DAU as proposed by Aurizon Network, after considering stakeholder submissions and having regard to the factors in s. 138(2) of the QCA Act, and other relevant parts of the QCA Act, including s. 137(1A).

13 NEGOTIATION FRAMEWORK

Aurizon Network's 2017 DAU proposal

Part 4 of Aurizon Network's 2017 DAU provides a framework for the negotiation of access rights. It outlines key steps in the negotiation process and the information access seekers and Aurizon Network may be required to provide as part of these negotiations.

The 2017 DAU negotiation framework consists of principles and procedures for:

- the making of an access application by an access seeker, and Aurizon Network's rights and obligations in respect of such applications, including the development of an Indicative Access Proposal (cls. 4.3–4.7)
- dealing with access applications that involve expansions (cl. 4.8)
- dealing with multiple access applications for the same access rights (cl. 4.9)
- the negotiation process, including the time period for negotiations, matters that must be addressed during negotiations and the circumstances in which negotiations will cease (cls. 4.10–4.13).

The negotiation framework proposed in Aurizon Network's 2017 DAU is largely unchanged from Aurizon Network's existing arrangements. Changes from the 2016 Undertaking are:

- clarification that the process under cl. 4.8(d) (that is, suspension of the negotiation process pending negotiation of an expansion) applies to all access applications for access rights that can only be provided by an expansion
- providing for a customer access seeker to nominate a railway operator to take over their access application and replace them as the access seeker (cl. 4.10(1)(c))
- correcting various clause cross-references (cls. 4.5 and 4.6).

Overview of Part 4 and its relationship with other parts of the 2017 DAU

Part 4 of the 2017 DAU is the starting point for an access seeker to seek to obtain access rights to the network and has a number of important linkages to other parts of the UT5 undertaking.

Fundamentally, Part 4 establishes a framework for parties to exchange information required to assess the access rights sought and, ultimately, successfully negotiate the terms of access. As set out in Part 5 of the 2017 DAU (Access Agreements), the terms of access comprise of an Access Agreement and a Train Operations Deed (discussed in Chapter 14).

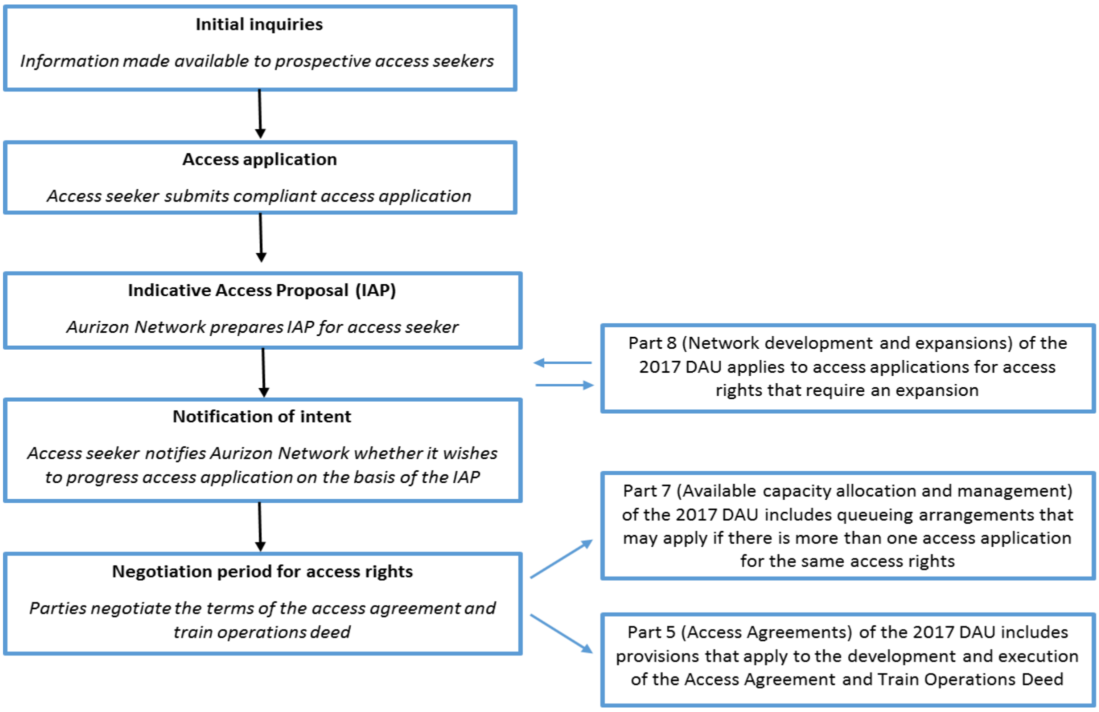
Aurizon Network's 2017 DAU contemplates an access seeker may be either of the following:

- a railway operator seeking to obtain access rights on behalf of a customer
- a customer seeking to obtain access rights for themselves, with the customer nominating a train operator to operate train services, utilising those access rights on their behalf (alternatively, a customer who is also an accredited railway operator may operate train services themselves).

Part 7 of the 2017 DAU (Available Capacity Allocation and Management) sets out a queuing mechanism which determines how access applications will be prioritised if there are multiple access applications for the same access rights. Further, the access rights being sought may require an expansion, in which case Part 8 of the 2017 DAU (Network Development and Expansions) will apply for the development of that expansion.

The following diagram provides an overview of the key stages of the Part 4 negotiation process and the linkages to other parts of the 2017 DAU. Aurizon Network has indicated it will include a diagram that clearly and accurately reflects the Part 4 processes in the 2017 DAU.[886]

Figure 24 Overview of Part 4 of Aurizon Network's 2017 DAU



Key issues identified during the QCA's investigation

The QCA has considered all elements of Part 4 of Aurizon Network's 2017 DAU in making this decision. The following issues attracted comment from stakeholders or have been identified for further consideration:

- process and requirements for applying for access (section 13.1)
- variations to access applications (section 13.2)
- applications for access rights that require expansions (section 13.3)
- the negotiation process (section 13.4).

The QCA did not receive any significant proposed amendments or submissions in relation to Part 4 of the 2017 DAU during our investigation.

Aurizon Network proposed amendments to various cross-references within Part 4 of the 2017 DAU.[887] The QCA has reviewed Aurizon Network's Part 4 of the 2017 DAU and made a number of amendments to correct cross-references in this part (see Appendix H).

[886] See drafting note in Schedule H of Aurizon Network's 2017 DAU.
[887] Aurizon Network, sub. 48: 45, 46, 51, 59, 60, 61, 66. The QCA notes the proposed drafting for Part 4 of the 2017 DAU that is included in Aurizon Network's submission contains several unmarked changes that appear to be a formatting error in the submission.

13.1 Process and requirements for applying for access

Aurizon Network's proposal

Part 4 of the 2017 DAU requires that requests for access be submitted to Aurizon Network in the form of an access application (cl. 4.3(a)). To assist prospective access seekers in preparing an access application, Aurizon Network is required to make available the preliminary and capacity information outlined in Schedule A of the 2017 DAU (this includes information on interface requirements, maps and drawings, and the master and daily train plans). Aurizon Network can also be required to meet with a prospective access seeker to discuss the access application process (cl. 4.2).

An access application must satisfy particular information requirements set out in Schedule B of the 2017 DAU. These include information describing the train services (for example, train service description and timetabling requirements) and information needed to assess the ability of the access seeker to use the access rights. However, an access seeker may be excused from providing particular required information if 'non-availability circumstances' apply. That is, the information cannot reasonably be produced or obtained, and Aurizon Network is satisfied this inability to provide the information does not indicate a lack of genuine intention to obtain the requested access rights.

Aurizon Network will issue an acknowledgement notice to a prospective access seeker, acknowledging a properly completed access application and confirming it will prepare an Indicative Access Proposal (IAP) for the requested access (cl. 4.4). However, Aurizon Network may reject an access application for access rights commencing more than five years in advance, unless the access rights require an expansion (cl. 4.4(d)).

At any point until negotiations cease, an access seeker, train operator or Aurizon Network may be required to enter into a confidentiality agreement in the form set out in Schedule I of the 2017 DAU (cl. 3.10). This agreement sets out a party's obligations for the protection of confidential information (as defined under the 2017 DAU).[888]

Indicative Access Proposal (IAP)

Following acknowledgement of a properly completed access application, Aurizon Network will develop an IAP for the access rights sought (cl. 4.6). The IAP will outline, among other things, an initial capacity assessment, the existence of any other requests for access that would affect Aurizon Network's ability to grant the access rights sought, and an initial estimate of the access charge (cl. 4.6(c)).

If an access seeker intends to progress its access application on the basis of the arrangements in the IAP, it must notify Aurizon Network of its intention prior to expiry of the IAP (being 60 business days, unless agreed otherwise and subject to particular suspensions of the negotiation process or resolution of disputes) (cls. 4.6 and 4.7). Following this notification, the negotiation period will commence (cl. 4.11.1) (the negotiation period is discussed further in section 13.4).

[888] See Chapter 12 for further details on confidential information for the purposes of Aurizon Network's 2017 DAU.

QCA analysis and decision

Summary of decision 13.1

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of the process and requirements for applying for access.**

The negotiation framework should provide clear guidance to access seekers on the process and information required to support an access application, thereby providing an access seeker with a level of certainty both about what is required from them in order to apply for access, and the timeframes in which Aurizon Network will act. Ultimately, negotiations are more likely to be effective and able to be concluded in a timely manner when Aurizon Network is provided with sufficient information to progress a request for access. Nonetheless, an access seeker should not be obliged to provide any more information than what is reasonably available and necessary, particularly in the earliest stages of the negotiation process.

In this regard, the QCA considers that the 2017 DAU is appropriate having regard to the s. 138(2) factors, including providing an appropriate balance of the legitimate business interests of Aurizon Network (s. 138(2)(b)) and the interests of access seekers (s. 138(2)(e)) by:

- setting out reasonably clear information requirements for access applications and IAPs
- providing reasonable flexibility for the provision of information by access seekers, including scope for access seekers to be excused from providing required information where information cannot reasonably be obtained
- providing certainty about the timeframes in which Aurizon Network will assess an access application and prepare an IAP for an access seeker.

The concerns raised by Pacific National regarding the confidentiality agreement set out in Schedule I of the 2017 DAU have been considered by the QCA. Specifically, Pacific National said:

- The confidentiality agreement should also bind the broader Aurizon Group, rather than only Aurizon Network (see cl. 6 of the confidentiality agreement)
- The penalties on Aurizon Network for any breach of the agreement (see cl. 7 of the confidentiality agreement) are relatively weak and should be strengthened.[889]

However, the QCA considers the confidentiality agreement as set out in Schedule I of the 2017 DAU is appropriate and provides sufficient protection for confidential information disclosed by parties in these circumstances. The QCA does not consider it necessary for the agreement to bind the broader Aurizon Group. The ring-fencing arrangements in Part 3 of the 2017 DAU already deal with Aurizon Network's obligations, and the protections it must put in place, in respect of the disclosure of confidential information to its related parties. The QCA also notes the provisions in the 2017 DAU regarding the Ultimate Holding Company Support Deed.[890]

The QCA also does not consider it necessary to prescribe particular penalties for a breach of the confidentiality agreement, noting it is within the power of the owner of the confidential information to seek remedies through legal proceedings if there is an actual, threatened or suspected breach of the agreement. The consequences of a breach will vary depending on any loss that may be suffered by the owner of the confidential information. In this context, the QCA

[889] Pacific National, sub. 19: 23.
[890] See Chapter 11.

considers it appropriate that any breach be addressed by the parties to the confidentiality agreement, which may include the seeking of legal remedies.

The QCA notes that the QRC proposed amendments to the definitions of 'access seeker' and 'prospective access seeker,' which seek to include references to the person acting on a bona fide basis and, in respect of a prospective access seeker, also acting in good faith.[891] However, it is not apparent to the QCA what issue the proposed amendments are seeking to address. The QCA considers the definitions proposed as part of the 2017 DAU are appropriate to approve.

After considering stakeholder submissions and having regard to the factors set out in s. 138(2) of the QCA Act, the QCA's decision is that it is appropriate to approve the 2017 DAU in respect of the process and requirements for applying for access. The QCA considers that the negotiation process in the 2017 DAU, in the context set out above, strikes an appropriate balance between the legitimate business interests of Aurizon Network and the interests of access seekers (ss. 138(2)(b) and (e) of the QCA Act).

13.2 Variations to access applications

Aurizon Network's proposal

The 2017 DAU provides scope for an access seeker to request variations to its access application. A variation may be requested at any time after the access seeker receives an acknowledgement notice from Aurizon Network (cl. 4.5).

If the requested variation is not a material variation[892], the access application will be varied and the negotiation process will continue, although Aurizon Network may be given a further period of time to prepare an IAP (cl. 4.5(b)). If Aurizon Network considers it is a material variation, it will notify the access seeker and provide details of the implications of the variation, such as whether an expansion is required or whether available capacity exists to satisfy the access rights sought (cl. 4.5(c)).

The access seeker may then notify Aurizon Network whether or not it wishes to proceed with the material variation or require the access application to be separated (so that one application may proceed without a material variation (cl. 4.5(d)).

Aurizon Network's 2017 DAU includes provisions for progressing the access application depending on the effect of the material variation (for example, cls. 4.5(d)–(f)).

If an IAP or revised IAP is issued in response to a material variation, the access seeker must notify Aurizon Network whether it wishes to continue to negotiate on the basis of the material variation. Alternatively, the access seeker may advise that it wishes to proceed without the material variation (cl. 4.5(g)).

[891] QRC, sub. 20, Annexure 2, Part 12.

[892] See definition of 'material variation' in Part 12 of the 2017 DAU. Broadly, there will be a material variation if it results in an increased or changed allocation of capacity, including changes to the origin or destination of the requested access rights.

QCA analysis and decision

> **Summary of decision 13.2**
>
> - **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of the arrangements for variations to access applications.**

The QCA considers it appropriate for access seekers to have the ability to vary access applications. This provides flexibility for access seekers to respond to changed circumstances and ensures its access application reflects an access seeker's up-to-date access requirements or proposed operations.

Aurizon Network's 2017 DAU sets out a comprehensive process for how it will respond to requests for variations to access applications and provides access seekers with choice on how a varied access application should be progressed (depending on the effect the variation has). The QCA considers these arrangements are appropriate and provide sufficient flexibility for an access application to be varied over time and appropriately balances the interests of Aurizon Network and access seekers (ss. 138(2)(b) and (e)).

The QCA notes that QRC did not raise any concerns with these aspects of the 2017 DAU,[893] nor did any other stakeholders.

After considering stakeholder submissions and having regard to the factors set out under s. 138(2) of the QCA Act, our decision is that it is appropriate to approve the 2017 DAU in respect of the arrangements for variations to access applications. The QCA considers that the arrangements for variations to access applications in the 2017 DAU, as outlined above, provide an appropriate balance between the interests of Aurizon Network and access seekers (ss. 138(2)(b) and (e) of the QCA Act).

13.3 Applications for access rights that require expansions

Aurizon Network's proposal

Aurizon Network's 2017 DAU includes provisions for dealing with applications for access rights that can only be provided with an expansion (cl. 4.8).

For applications for access rights that require an expansion, the provisions relating to the development of an expansion apply (discussed in Chapter 18). As part of its consideration of the access application, Aurizon Network must notify the access seeker of the portion of access rights (if any) that can be provided without an expansion. The access seeker may then elect to separate the application into two so that an application may be progressed for the portion of access rights that do not require an expansion.

Aurizon Network or the access seeker may suspend negotiations until there is agreement (or resolution of any dispute) about how to fund the expansion, unless the parties agree to continue negotiations for access in parallel with any negotiations about funding the expansion (cl. 4.8(d)). When negotiations are suspended, Aurizon Network may periodically request confirmation (no more than once every six months) from the access seeker (cl. 4.8(e)):

- that there is an ongoing requirement for the access rights
- of the reasonable likelihood that the access seeker will be able to utilise the access rights

[893] QRC, sub. 20, Annexure 1: 1–2.

- whether there is any material change to the information contained in the access application.

A failure to respond to these requests within 20 business days may result in the access application being deemed withdrawn (cl. 4.8(f)).

Further, there is also scope for Aurizon Network to suspend negotiations with access seekers in circumstances where another access seeker has been granted a provisional capacity allocation (cl. 4.8(g)).

QCA analysis and decision

> **Summary of decision 13.3**
>
> - **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of its treatment of access applications for access rights that require expansions.**

The QCA considers Part 4 of the 2017 DAU contains appropriate arrangements for how applications for access rights that require an expansion (either in whole or in part) will be progressed. In particular, the QCA is satisfied with Aurizon Network's clarification that the process in cl. 4.8(d)[894] also applies to access applications in respect of access rights that can only be provided by an expansion, rather than to only those access applications that are separated under cl. 4.8. Stakeholders also supported this clarification.[895]

The QCA considers that the arrangements for an access application to be separated, if portions of the relevant access rights can be provided without an expansion, are appropriate. The QCA considers the inclusion of these arrangements to be in the interests of all parties, as it ensures that negotiations in respect of the portions of access rights that do not require an expansion may proceed and are not unnecessarily held up (ss. 138(2)(b) and (e) of the QCA Act). It also promotes the efficient use of the network, furthering the objects of the QCA Act (s. 138(2)(a)).

Further, the QCA is also satisfied with the circumstances in which the negotiation process can be suspended under this clause. Recognising that the development of an expansion involves a range of matters that must be settled, including funding arrangements, and concept and feasibility studies, the QCA considers it reasonable for the negotiation process to be suspended until those matters have been resolved (unless otherwise agreed by the parties). The QCA also considers it reasonable for access seekers to be required to periodically confirm their ongoing requirement for, and likely ability to use, the relevant access rights. These arrangements provide a reasonable balance between the legitimate business interests of Aurizon Network and the interests of access seekers, and ensure requests for access remain current and necessary.

After considering stakeholder submissions and having regard to the factors set out under s. 138(2) of the QCA Act, the QCA's decision is that it is appropriate to approve the 2017 DAU in respect of its treatment of access applications for access rights that require expansions. The QCA considers that treatment of access applications for access rights that require expansions in the 2017 DAU, in the context and for the reasons set out above, provides for an appropriate balance between the interests of Aurizon Network and access seekers (ss. 138(2)(b) and (e) of the QCA Act).

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[894] That is, the application of particular clauses in Part 8 of the UT5 undertaking that are relevant to the development of expansions and scope for suspension of the negotiation process.
[895] QRC, sub. 20, Annexure 1: 2.

13.4 Negotiation process

Aurizon Network's proposal

Clause 4.11.1 of the 2017 DAU defines the start and end dates for the negotiation period. This clause contemplates a negotiation period in respect of:

- an access seeker's access (including negotiation of an access agreement), in which case the negotiation period commences when the access seeker gives Aurizon Network a notification of intent under cl. 4.7
- a train operator's train operations deed, in which case the negotiation period commences when the train operator provides Aurizon Network all of the information referred to in cl. 4.10.2 (for example, identifying the relevant access seeker or customer).

The 2017 DAU outlines the issues to be addressed by Aurizon Network and the access seeker or train operator (as applicable) during the negotiation period, to facilitate the negotiation of an Access Agreement or Train Operations Deed (cls. 4.11.2 and 4.12). These issues include the information the parties must provide each other, and obligations for the development of an operating plan, interface risk management plan and other operational matters. The requirements for these plans are set out in Schedule C of the 2017 DAU.

The 2017 DAU includes various ways in which a railway operator may assist a customer access seeker (an end user), including being nominated to act on a customer access seeker's behalf in negotiations or to take over its access application and replace the customer as the access seeker (or vice versa) (cl. 4.10.1).

Generally, the negotiation period will end nine months after commencement, unless the parties agree to extend the period, the negotiation process has been suspended in accordance with the UT5 undertaking (for example, to negotiate an expansion) or a dispute arises between the parties (cls. 4.11.1(d) and (g)). However, Aurizon Network may end negotiations with an access seeker or train operator earlier in the circumstances set out in cl. 4.13 of the 2017 DAU. These circumstances include there being no genuine intention of the access seeker or train operator to obtain the access rights sought or no reasonable likelihood of utilising access at the level sought.

Negotiations may also cease if Aurizon Network can no longer offer access under the terms of the IAP due to available capacity being reduced or the infrastructure enhancements contemplated by the IAP can no longer be developed. However, if a portion of the access rights sought can still be provided, there is scope for negotiations to continue on the basis of a revised IAP for that portion of access rights (cls. 4.11.1(d)(v) and (e)).

Dealing with multiple applications for the same access

Aurizon Network's 2017 DAU includes arrangements to deal with multiple access applications, where there is insufficient available capacity to satisfy more than one access application.

In accordance with Part 7 of the 2017 DAU, Aurizon Network is required to prioritise the allocation of access rights to the access seeker that submits its application first (cl. 7.5.2(b)). A queuing mechanism determines the order in which Aurizon Network is to negotiate with access seekers. Once an access seeker gives a notification of intent under cl. 4.7, they will be deemed to have joined the queue on the date the access seeker submits a properly completed access application that includes all necessary information (cl. 4.4(c)). The queueing mechanism is discussed further in Chapter 16.

The 2017 DAU also includes arrangements for how Aurizon Network will deal with access applications from a customer and/or railway operator(s) for the same access rights. Access applications from railway operators will be disregarded if there is another application from a customer access seeker (or another railway operator nominated by a customer) for those same access rights (cl. 4.9).

QCA analysis and decision

Summary of decision 13.4

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals for the negotiation process.**

The QCA considers that Part 4 of the 2017 DAU provides sufficient clarity for access seekers over the issues that are to be negotiated during access negotiations and the actions Aurizon Network will perform during the negotiation period (for example, providing a proposed access charge and advice on how that was determined). The QCA considers this important to the interests of access seekers, as it provides them with certainty up-front about what must be addressed during the negotiation process. It is also likely to facilitate more efficient negotiations.

The QCA is also satisfied by the circumstances in which access negotiations may end under Part 4 of the 2017 DAU. The QCA considers these arrangements provide access seekers with certainty over the circumstances in which Aurizon Network may end access negotiations.

Part 4 of the 2017 DAU accommodates both railway operators and customers being access seekers and deals with circumstances where there are access applications from a customer and/or railway operator(s) for the same access rights. There is stakeholder support for Aurizon Network's clarifying amendment enabling a customer access seeker to nominate a railway operator to take over a customer's access application and position as access seeker.[896]

The QCA notes Anglo American's objections to the ability of a train operator to hold access rights in its own right and its view that a train operator or other supply chain member should only be able to hold access rights on behalf of, and for the benefit of, an end user. Anglo American considered allowing train operators to be access holders in their own right could otherwise incentivise anti-competitive conduct through a secondary market, including the bundling of supply chain rights at an unregulated price or discrimination between above-rail operators or customers.[897]

However, the QCA does not consider there is sufficient reason to include the restrictions on access holders suggested by Anglo American. The QCA notes Part 4 of the 2017 DAU already includes various obligations on an access seeker to demonstrate an ability to use the requested access rights. In particular, non-customer access seekers (railway operators) are obliged to identify in their access application a customer or prospective customer for the requested access rights and confirm that the customer or prospective customer has authorised the access seeker to apply for the relevant access rights (cl. 3(a) of Schedule B). Ultimately, having no reasonable likelihood of having a customer for the relevant access rights is grounds for the cessation of negotiations (cl. 4.13(c)). The QCA also notes that a customer has the ability to take over an access application and replace their railway operator as the access seeker (cl. 4.10.1(c)(ii)) and,

[896] QRC, sub. 20, Annexure 1: 2.
[897] Anglo American, sub. 18: 14–15.

during the term of an access agreement, there is the ability for customer-initiated transfers of access rights (cl. 7.4.2(e)).

More broadly, there are mechanisms in Aurizon Network's 2017 DAU that guard against the risk of capacity hoarding, such as take-or-pay arrangements and the process for the resumption of access rights. Further, with regard to Anglo American's concerns about discrimination, the QCA notes there are arrangements in the QCA Act (and Aurizon Network's 2017 DAU) that protect against unfair differentiation by an access provider.

Overall, the QCA considers these arrangements in respect of railway operators and customers are appropriate and provide flexibility in the scenarios under which access rights can be contracted. The QCA considers these arrangements facilitate competition between railway operators and contain adequate considerations for the efficient use of access rights.

After considering stakeholder submissions and having regard to the factors set out under s. 138(2) of the QCA Act, the QCA's decision is that it is appropriate to approve the 2017 DAU in respect of the arrangements for the negotiation process. The QCA considers that the negotiation process in the 2017 DAU, in the context and for the reasons set out above, provides an appropriate balance between the interests of all parties (ss. 138(2)(b), (e) and (h) of the QCA Act).

14 ACCESS AGREEMENTS

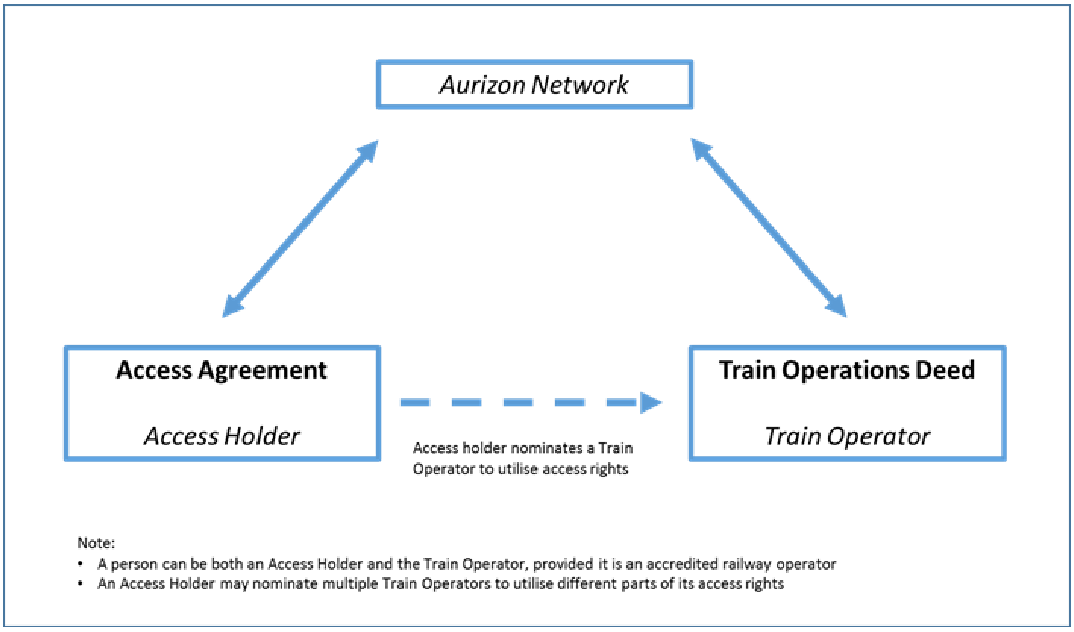
14.1 Aurizon Network's 2017 DAU proposal

Part 5 of Aurizon Network's 2017 DAU sets out provisions for the development of access agreements between Aurizon Network and access seekers. Access agreements form the contractual basis for an access holder's access to the CQCN and are developed following the negotiation of access rights in accordance with the negotiation framework set out under Part 4 of the 2017 DAU (see Chapter 13).

Two documents are necessary for access to the CQCN:

- an Access Agreement —it defines the relevant access rights, sets out various processes for the management of those access rights (for example, nomination of a train operator to utilise access rights, and transfers, relinquishment and resumption of access rights) and includes provisions for the payment of access charges
- a Train Operations Deed – this allows a train operator to operate train services in connection with the access rights granted under an Access Agreement. The Train Operations Deed deals with matters related to the operation of train services, such as development of operating plans and interface risk management.

Figure 25 Relationship between an Access Agreement and a Train Operations Deed



Aurizon Network's 2017 DAU framework consists of:

- provisions for the development of an Access Agreement and a Train Operations Deed (see cls. 5.1–5.3)
- a Standard Access Agreement and Standard Train Operations Deed (the Standard Agreements). The Standard Agreements are included in Volume 3 of Aurizon Network's 2017 DAU.

The framework for access agreements proposed in Aurizon Network's 2017 DAU is largely unchanged from Aurizon Network's existing arrangements. The key change from the 2016

Undertaking is the inclusion of processes for the reduction of an access holder's nominated monthly train services based on train payload (see cls. 10–12 of the Standard Access Agreement and cls. 11–12 of the Standard Train Operations Deed).

Key issues identified during the QCA's investigation

The QCA has considered all elements of Part 5, the terms of the Standard Agreements, stakeholder submissions, as well as other relevant aspects of Aurizon Network's 2017 DAU proposal[898] in making this decision. The following issues attracted comment from stakeholders, or were identified for further consideration:

- provisions relating to the development of an Access Agreement and a Train Operations Deed (section 14.2)
- the terms of the Standard Agreements (section 14.3).

14.2 Development and execution of an Access Agreement and Train Operations Deed

Aurizon Network's proposal

An Access Agreement and a Train Operations Deed are required to obtain and utilise access rights to the CQCN (cls. 5.1(a) and 5.3(a) of Aurizon Network's 2017 DAU).

As proposed by Aurizon Network, the terms of an Access Agreement must be the Standard Access Agreement (modified, where required, for non-coal train services) (cl. 5.1(c)). However, it is open for an access seeker to agree with Aurizon Network to vary the terms of the Standard Access Agreement, with any such amendments to be negotiated by the parties acting reasonably and in good faith (cl. 5.1(d)). This includes provisions of the UT5 undertaking to be incorporated by reference into the Standard Access Agreement.[899]

That said, an Access Agreement must not include a term that limits Aurizon Network's ability to require an access holder to disclose to Aurizon Network all information required to prepare and publish the master train plan (MTP) (cl. 5.1(f)).[900] Any disputes about the negotiation of the terms of an Access Agreement will be resolved by completion of the Standard Access Agreement (cl. 5.1(e)).

Similar provisions apply in respect of the development of a Train Operations Deed (cl. 5.3).

[898] See, for example, Part 7 (Available capacity allocation and management) of Aurizon Network's 2017 DAU.

[899] For the Standard Access Agreement, these 'incorporated provisions' are interface risk, transfer, relinquishment, reduction factor, resumption and conditional access provisions (as defined under the Standard Access Agreement). Interface risk provisions are the only incorporated provisions for the Standard Train Operations Deed. See cl. 3 of the Standard Access Agreement and Standard Train Operations Deed.

[900] For more information on the master train plan, see Chapter 17.

QCA analysis and decision

Summary of decision 14.1

- **The QCA considers it appropriate to approve Aurizon Network's 2017 DAU proposals for the framework for the development and execution of an Access Agreement and Train Operations Deed, subject to amendments to provisions included as 'Incorporated Provisions' and amendments to clarify how disputes in relation to the negotiation of the terms of an Access Agreement and Train Operations Deed are to be determined.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are set out in the Amended 2017 DAU at Appendix H, including cls. 5.1, 5.3 and 11.1 of the DAU and cl. 1 of the Standard Access Agreement.**

The QCA considers that Part 5 of the 2017 DAU provides an appropriate framework for the development and execution of an Access Agreement and a Train Operations Deed, subject to amendments to make clear about how disputes in relation to the negotiation of the terms of an Access Agreement and Train Operations Deed are to be determined, including for non-coal carrying services (see Appendix H). These are discussed in Chapter 21 (Dispute Resolution and Decision Making) of this decision.

The QCA considers it appropriate that an access seeker has a clear right to enter into an Access Agreement or Train Operations Deed on the terms of the Standard Agreements. Importantly, this does not prevent access seekers from negotiating alternative terms with Aurizon Network, but it does ensure that the Standard Agreements provide a 'safe harbour' as they are available without the need for further negotiation, or if negotiations subsequently fail. The QCA considers the proposed provisions balance the interests of all parties (ss. 138(2)(b),(e) and (h)), and facilitates the timely development and execution of Access Agreements (s. 138(2)(a)). It will also mean that Aurizon Network will only have to negotiate with access seekers that are willingly and genuinely seeking alternative terms to the Standard Agreements.

'Incorporated' provisions

The QRC and Pacific National proposed the inclusion of additional provisions in the UT5 undertaking that would be incorporated by reference into the Standard Agreements. Specifically, they proposed moving the clauses dealing with the reduction of nominated monthly train service entitlements based on train payload (cls. 10–12 of the Standard Access Agreement and cls. 11–12 of the Standard Train Operations Deed) into the body of the UT5 undertaking and including these as 'incorporated provisions'.[901]

The QCA notes that, in addition to these clauses within the Standard Agreements, Aurizon Network proposed more general provisions that largely replicate these clauses be included within the body of its 2017 DAU.[902]

The QCA considers it appropriate for the more detailed clauses relating reductions of train service entitlements based on train payload to sit within the body of the Standard Agreements and that the more general provisions should not be incorporated provisions. These mechanisms involve detailed processes for the variation of an access holder's contracted train service entitlements and an operator's operational rights that are defined under the respective

[901] QRC, sub. 20: 36; Pacific National, sub. 19: 16.

[902] See cls. 7.4.3(f)–(k) of Aurizon Network's 2017 DAU and cl. 7.4.3(g)–(l) of the collaborative drafting developed by Aurizon Network and the QRC.

agreements. From an operational perspective, the QCA considers, on balance, that it is appropriate that these should be located within the agreements. Accordingly, the QCA considers that cls. 7.4.3(g)–(l) of the DAU should not be incorporated provisions.

Further, the QCA notes that, as is the case for any negotiated variations to the Standard Access Agreement, the incorporated provisions are subject to the 'deeming' provisions in Schedule F of the UT5 undertaking with respect to the calculation of Aurizon Network's actual revenues for revenue-cap purposes.[903] Because of this, the QCA does not consider it appropriate to restrict the ability to negotiate variations of these incorporated provisions in the Standard Agreements, as suggested by Pacific National.[904]

Accordingly, apart from the amendments the QCA requires in relation to the provisions included as incorporated provisions and to disputes about the terms of an Access Agreement and Train Operations Deed, the QCA considers the general structure of Part 5 of the 2017 DAU and Standard Agreements as proposed by Aurizon Network appropriately balances the interests of all parties (ss. 138(2)(b), (e) and (h) of the QCA Act).

14.3 Terms of the Standard Agreements

Aurizon Network's proposal

A Standard Access Agreement and Standard Train Operations Deed were included as part of the 2017 DAU (Volume 3 of the 2017 DAU). These documents set out the standard terms on which Aurizon Network will provide access to the CQCN, including:

- the calculation and payment of access charges
- provisions for the management and use of access rights, such as the nomination of train operators to utilise the access rights
- the allocation of risks and liabilities between the parties, such as security and insurance requirements, and liability and indemnity provisions
- provisions related to the operation of train services, such as processes for the development and approval of operating and interface risk management plans
- dispute resolution.

In addition, there are several provisions of the UT5 undertaking that are incorporated by reference directly into Access Agreements and Train Operations Deeds, including provisions setting out processes for the transfer, relinquishment and resumption of access rights. These Standard Agreements also include a process enabling changes to relevant provisions of the undertaking, as approved over time, to be incorporated in Access Agreements and Train Operations Deeds–that is, Access Agreements and Train Operations Deeds that have been executed and are in force, are effectively updated to account for changes to the incorporated provisions.

The Standard Agreements included as part of the 2017 DAU are largely unchanged from Aurizon Network's 2016 Undertaking. The most significant change is the inclusion of mechanisms for the reduction of an access holder's nominated monthly train services based on train payload. These are discussed in further detail below.

[903] See Chapter 9.
[904] Pacific National, sub. 19: 21.

14.3.1 Reduction of nominated monthly train services

Aurizon Network included in its 2017 DAU three circumstances in which an access holder's nominated monthly train services (train paths) may be reduced during the term of an Access Agreement, based on train payload:

- 'Access holder-initiated reduction'–The access holder may request an increase in the maximum payload for a train service type, with a consequent reduction in the nominated monthly train services (cl. 11 of the Standard Access Agreement and cl. 11.2 of the Standard Train Operations Deed).
- 'Reduction due to exceeding maximum payload'–Aurizon Network may reduce the train services if, at a point in time, the average annual payload for a train service type has exceeded the maximum payload for that train service type as specified in the agreement (cl. 10 of the Standard Access Agreement and cl. 11.1 of the Standard Train Operations Deed).
- 'Reduction to create additional capacity'–Aurizon Network may commence a mandatory process requiring an increase in the nominal payload, with a consequent reduction in the nominated monthly train services (cl. 12 of the Standard Access Agreement and cl. 12 of the Standard Train Operations Deed).

There are also specific provisions in Aurizon Network's 2017 DAU related to the relinquishment of access rights[905] that are associated with these processes (cl. 7.4.3).

During the consultation process, Aurizon Network and other stakeholders submitted collaborative amendments to Aurizon Network's 2017 DAU in relation to these processes.

A consensus position was developed that proposed Aurizon Network's 2017 DAU be amended by removing the 'reduction to create additional capacity' mechanism and proposed amendments to the other two mechanisms. Aurizon Network submitted drafting amendments to be included in the UT5 undertaking and the Standard Agreements to reflect the consensus positions developed with stakeholders participating in the collaboration process. Aurizon Network also included proposed amendments to relinquishment fees payable and other changes to Part 7 of the 2017 DAU.

[905] For information on relinquishments more generally, see Chapter 16.

QCA analysis and decision

Summary of decision 14.2

- **The QCA's decision is that Aurizon Network's 2017 DAU (including the Standard Access Agreement and Standard Train Operations Deed) be amended to reflect the drafting developed by Aurizon Network and QRC, as submitted in their respective collaborative submissions, so that:**
  - **(a) the 'Access holder-initiated reduction' provisions and 'reduction due to exceeding maximum payload' provisions as submitted by Aurizon Network in its collaborative submission are included. Also, a note be included clarifying that train tests approved by Aurizon Network are exempt from the Reduction Notice trigger process**
  - **(b) for any surplus access rights that are relinquished under the provisions referred to above, a 'SAR Relinquishment Fee' should be payable based on the difference between the AT_2 charges that would have been paid but for the relinquishment on the terms as agreed by participating stakeholders and Aurizon Network**
  - **(c) the mandatory 'Reduction to create additional capacity' provisions are removed.**
- **The QCA's decision is that the Standard Access Agreement and Standard Train Operations Deed included as part of Aurizon Network's 2017 DAU be amended so that:**
  - **(a) cl. 21.2 in the Train Operations Deed is amended to align with new obligations the QCA requires to be included in Part 7A of the 2017 DAU in respect of minimising disruptions to train services**
  - **(b) the benefit of liability provisions within the Train Operations Deed and the Standard Access Agreement are conditional upon Aurizon Network's compliance with the amended clause listed in (a) above**
  - **(c) Aurizon Network will have the benefit of the 5 per cent allowable threshold for breaches in relation to a failure to make the infrastructure available only if it is not in wilful default of its obligations under the amended clause listed in (a) above**
  - **(d) Further drafting changes, including cross referencing corrections are also required.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU and Standard Access Agreement and Standard Train Operations Deed are provided in Appendix H.**

The QCA is required by the QCA Act to consider the 2017 DAU submitted by Aurizon Network and either approve, or refuse to approve, that DAU. In coming to that decision, the QCA must have regard to all of the factors under s. 138(2) of the QCA Act. Included in these factors is 'any other issues the authority considers relevant' (s. 138(2)(h) of the QCA Act). Insofar as our decision relates to the collaborative submission amendments, the fact that stakeholders participating in the collaborative process have reached a consensus position is relevant to the decision on the 2017 DAU Standard Agreements.

(a) 'Access holder-initiated reduction' provisions and 'reduction due to exceeding maximum payload'

Aurizon Network's 2017 DAU provided the ability to reduce train paths where an access holder exceeds its maximum payload.[906] Aurizon Network initially considered a mechanism was necessary for the mandatory reduction of nominated monthly train services where an access holder exceeded its maximum payload.[907] Stakeholders did not agree with Aurizon Network's submission in this regard.[908]

Aurizon Network also stated that there is a need for the 2017 DAU to include a mechanism for access holder-initiated increases in maximum payload in order to facilitate above-rail productivity improvements, such as longer trains, as the existing relinquishment provisions did not apply appropriately in these circumstances.[909] Stakeholders indicated support for the inclusion of a mechanism of this nature.[910]

During the collaborative submission process, Aurizon Network and the QRC developed consensus drafting amendments that provide an intermediate step to relinquishment, whereby Aurizon Network will first give notice of any instance of the average annual payload exceeding the maximum payload for a particular train service type.[911]

The proposed drafting agreed between Aurizon Network and the QRC provides that, if the maximum annual payload is exceeded, the access holder will have the option to either:

- maintain its existing maximum payload by ensuring the operator rectifies its behaviour to comply with that maximum payload; or
- increase the maximum payload in accordance with the amended access-holder-initiated reduction mechanism.

By linking the reduction due to exceeding maximum payload trigger to the access-holder initiated reduction mechanism, the consensus drafting amendments give access holders more control in relation to their access rights and lessen the mandatory nature of Aurizon Network's initial proposal.

The QCA accepts the inclusion of this mechanism as it provides a tailored process for an access holder to seek a relinquishment of access rights based on above-rail productivity improvements. The QCA notes the proposed mechanism contemplates the payment of a relinquishment fee for any surplus access rights relinquished in accordance with the UT5 undertaking (discussed below).

The amendments to the 2017 DAU and the Standard Agreements presented in collaborative submissions have largely addressed the concerns raised by stakeholders in their initial submissions.[912] These amendments also provide an option to optimise the capacity of the network whilst safeguarding access holders' contractual rights. This is in the interests of Aurizon Network, access seekers, access holders and promotes the efficiency of the network (ss. 138(2)(a), (b), (d), (e) and (h)). The QCA's decision is to amend Aurizon Network's 2017 DAU and Standard Agreements to include the 'access holder-initiated reduction' and 'reduction due to

[906] See cl. 10 of the Standard Access Agreement and cl. 11.1 of the Standard Train Operations Deed.
[907] Aurizon Network, sub. 1: 51–52.
[908] QRC, sub. 20: 34; BMA, sub. 24: 5–6; QCoal, sub. 16: 2–3.
[909] Aurizon Network, sub. 1: 52.
[910] QRC, sub. 20: 34–35; Pacific National, sub. 19: 12; QCoal, sub. 16: 3; BMA, sub. 24: 5–6.
[911] Aurizon Network, sub. 26: 6; Appendix 1; QRC, sub. 29: 3 (cl. 11 of the Standard Access Agreement and cl. 11 of the Standard Train Operations Deed, and cl. 7.4.8(g) of the DAU).
[912] QRC, sub. 20, Annexure 4, cl. 11; Annexure 5, cl. 11.

exceeding maximum payload' provisions as submitted by Aurizon Network and the QRC in their collaborative submissions (but noting amendments relating to cl. 5.1(d) and the incorporated provisions as discussed above).[913]

There were also a number of more specific issues initially raised by stakeholders in relation to the proposed mechanism which are discussed in the following paragraphs.

Pacific National accepted the drafting agreed through the collaborative submission process on the understanding that any trials of longer or larger trains that are undertaken with the agreement of Aurizon Network will be exempt from the test which triggers the notice provisions.[914]

The QCA agrees with Pacific National's submission in this regard. The relevant parties should recognise the need for a reasonable amount of flexibility to allow for testing of innovations. An overly strict application of the average annual payload trigger is not in the legitimate business interests of Aurizon Network or the relevant access holder (s. 138(2)(b),(h)). The QCA therefore requires the inclusion of an amendment to confirm that train tests approved by Aurizon Network are exempt from the reduction notice trigger process. The QCA notes Aurizon Network has proposed a drafting note to this effect,[915] and considers this is appropriate to include within these provisions.

The QRC said that it had agreed drafting with Aurizon Network.[916] However, its agreement to the 'capacity test'[917] was subject to Aurizon Network providing a list of examples of the way in which capacity may be affected by the change in payloads.[918]

Subsequently, Aurizon Network provided the QRC with examples of how Aurizon Network would manage the capacity test (under the capacity test outlined in cl. 10.2 of the collaborative submission Standard Access Agreement). The QRC, after reviewing Aurizon Network's examples, noted that Aurizon Network intends to adopt a very strict view of when an increase to payload will result in the consumption of additional capacity. The QRC said that the effect of Aurizon Network's capacity test is that practically speaking an access holder would only be able to increase its contracted payload where it elects to relinquish train paths.

After reviewing Aurizon Network's proposed capacity test, the QRC proposed additional amendments to cl. 10.2 of the Standard Access Agreement to introduce a 'materiality test' and also require Aurizon Network to disregard the impact of a change in load and unload times (as users are already required to demonstrate port capacity and capacity at the loading facility under cl. 10.2(a)(i) of the collaborative submission Standard Access Agreement).[919]

The QCA does not consider it appropriate to further amend Aurizon Network's 2017 DAU from the collaborative submission drafting in relation to cl. 10.2(b) of the Standard Access Agreement. The QCA considers it appropriate that if an increase to payload will result in the consumption of additional capacity, that increase should not result in other access holders being unable to use contracted train service entitlements.

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[913] See the proposed collaborative submission amendments to clauses in the Standard Agreements (cl. 11) and Part 7 (cl. 7.8.4(g)) in Aurizon Network, sub. 26, Appendix 1 and QRC, sub. 29.
[914] Pacific National, sub. 28: 3.
[915] Aurizon Network, sub. 49: cl. 11.1; sub. 50: cl. 11.1.
[916] QRC, sub. 29: 3.
[917] Proposed to be applied under the proposed amendments to cl. 10.2(a)(ii) as outlined in Aurizon Network, sub. 26, Appendix 1.
[918] QRC, sub. 29: 3.
[919] QRC, Response to QCA information request, 6 June 2017.

The QCA understands that the trigger for resumption under the capacity test is not just whether or not any proposed payload results in increased utilisation of capacity; but rather, whether or not that additional capacity requirement will adversely impact on other access holders' access rights (cl. 10.2(a)(ii) of the collaborative submission drafting of the Standard Access Agreement).

If access holders want to increase their payload and maintain their surplus access rights, the consensus drafting amendments allow for this outcome, subject to there being sufficient capacity to do so.

Further, Aurizon Network's assessment of whether or not the increased payload can be accommodated must be reasonable[920] and it is subject to dispute.[921] The QCA considers the requirement for Aurizon Network to act reasonably is capable of objective assessment. The QCA also considers that the reasonableness requirement negates the need for the QRC's proposal for any increased utilisation of capacity to first pass a materiality threshold. The QCA notes that stakeholders did not provide any objections to our position on this matter.[922]

Therefore, the QCA considers the method of determining whether or not an access holder can increase payload and retain surplus access rights as submitted via the collaborative process is appropriate. It strikes an appropriate balance between the interests of access holders, access seekers and Aurizon Network's legitimate business interests (ss. 138(2)(b),(e) and (h)). The mechanism, when combined with the other consensus amendments to the Standard Agreements, also promotes increased productivity and efficiency in the network (ss. 138(2)(a) and (d)).

(b) Application of the relinquishment fee

Aurizon Network considered that the existing relinquishment fee[923] arrangements applied inappropriately in circumstances where an access holder's access rights are relinquished due to above-rail productivity improvements (that is, less train paths are required to transport the same volume of tonnes).

As such, Aurizon Network considered the relinquishment fee effectively penalises an access holder and acts as a barrier to the 'freeing up' of train paths for use by access seekers.[924] Aurizon Network said the purpose of a relinquishment fee is distorted when it disincentivises an access holder from improving efficiencies driven by advances in technology and operational processes.[925]

The QCA notes Aurizon Network's 2017 DAU arrangements proposed the calculation of a relinquishment fee for relinquishments under cl. 11 of the Standard Access Agreement (which included a drafting note that Aurizon Network and the QRC were working on a mechanism).

In the collaborative submission process, QRC and Aurizon Network developed consensus provisions that provide for the payment of a fee equal to the AT_2 component of access charges that would have been payable in relation to the train paths that have been relinquished or

[920] See cl. 10.2(a) of the Standard Access Agreement included at Appendix H.
[921] See cl. 10.3(a)(i) of the Standard Access Agreement included at Appendix H.
[922] QRC, sub. 53: 41 — The QRC supported the QCA's position on proposed amendments to Part 5 of the 2017 DAU relating to disputes under Part 11 of the 2017 DAU, but made no additional comment in relation to the terms of the Standard Agreements.
[923] Broadly, a relinquishment fee is calculated on the basis of 50% of the take-or-pay liability (i.e. AT_2, AT_3 and AT_4 components of access charges) for the relinquished access rights over the remaining term of the access agreement.
[924] Aurizon Network, sub. 1: 52–53.
[925] Aurizon Network, sub. 1: 52.

reduced. This is referred to as the 'SAR Relinquishment Fee'.[926] The relevant provisions are contained in cls. 10, 11 and 13 of the collaborative submission of the Standard Access Agreement and cl. 7.4.8 of the collaborative submission version of the 2017 DAU.

Stakeholders generally supported the payment of a relinquishment fee where an access holder elects to relinquish train paths following an increase of payloads. The QRC considered this is 'necessary to ensure other access holders are not adversely affected by a loss of system revenue arising from the relinquishment'[927], which was a sentiment shared by Pacific National.[928] There was stakeholder support for basing the relinquishment fee on the AT_2 tariff component on the basis as this is the only component calculated based on train paths.[929]

In contrast, BMA said:

> [A]ccess holders should have the right to relinquish train paths free of charge as a result of creating operating efficiencies. If an access holder must pay to effectively operate more efficiently (i.e. haul the same tonnes using less train paths), there is no incentive to change from the status quo and make (sometimes costly) improvements that ultimately free up capacity for the overall benefit of the network.[930]

While noting that the fee may need to be recovered by other system users via the revenue cap mechanism, BMA considered that 'similar forms of cost spreading exist and form part of the price and revenue cap regime in operation'.[931]

Aurizon Network said that BMA withdrew its opposition during the collaborative submission process.[932] Other stakeholders agreed with the collaborative submission drafting of the SAR relinquishment fee provisions.[933]

The QCA has considered BMA's initial contention for opposing a SAR relinquishment fee. While the QCA acknowledges the benefits of making capacity available to the supply chain, it notes existing arrangements already include mechanisms that can mitigate a potential relinquishment fee. These include if there is alternative demand for the relevant access rights—for example, processes for the transfer of access rights (cl. 7.4.2) or reduction of a relinquishment fee (or transfer fee) if the relevant access rights are utilised by a new access holder (cl. 7.4.4(d)). The QCA does not consider it appropriate for users to bear the costs associated with an access holder relinquishing train service entitlements it no longer requires, or is no longer utilising appropriately. The QCA also notes that BMA did not make a further submission on this matter in response to the draft decision.

However, the QCA does consider that, at a principle level, relinquishment arrangements should not disincentivise above-rail productivity improvements that result in the 'freeing up' of train paths for use by access seekers. This furthers the object of Part 5 of the Act (s. 138(2)(a)) and is a factor to be considered and balanced under s. 138(2).

Accordingly, the QCA's decision is to accept the SAR relinquishment fee provisions and mechanisms in the collaborative submission versions of the Standard Access Agreement and the

[926] See cl. 13.5 of the collaborative submission drafting of the Standard Access Agreement and cl. 7.4.8 of the sub. 26 and sub. 29. Where SAR refers to 'surplus access rights'.
[927] QRC, sub. 20: 35.
[928] Pacific National, sub. 19: 8.
[929] QRC, sub. 20: 35; Pacific National, sub. 19: 8.
[930] BMA, sub. 24: 6.
[931] BMA, sub. 24: 6.
[932] Aurizon Network, sub. 26: 6 (footnote 8).
[933] See QRC, sub. 29: 3; Pacific National, sub. 28: 3.

2017 DAU and to incorporate these provisions within the amendments required to Aurizon Network's 2017 DAU.[934] The QCA considers this approach to relinquishment fees provides an appropriate balance between the interests of access seekers, access holders and Aurizon Network, and they do not act as a disincentive to implementing above-rail productivity improvements efficiently (ss. 138(2)(b), (e) and (h)). These provisions also promote the efficient use of the network (s. 138(2)(a)).

(c) Mandatory reduction of train services to create capacity

The QCA notes Aurizon Network's comment that in some circumstances it may be more cost-effective to create additional capacity through increases in an operator's maximum payload rather than making additional below-rail investments. Aurizon Network said that, in the absence of a mechanism for Aurizon Network to reduce train services, it would be required to seek the commercial agreement of numerous access holders, which would likely result in Aurizon Network being forced to undertake a more costly below-rail investment where it cannot obtain the consent of access holders who may not have a commercial incentive to increase their payloads and reduce train paths.[935]

Stakeholders did not support inclusion of this mechanism.[936]

The QCA notes that, following collaborative submission process, Aurizon Network submitted that its 2017 DAU be amended by deleting cl. 12 from proposed the Standard Access Agreement and Standard Train Operations Deed.[937] Having regard to the s. 138(2) factors, including Aurizon Network and stakeholder consensus on this matter, the QCA's decision is that it is not appropriate that the proposed mandatory reduction of access rights to create capacity mechanism be included in Aurizon Network's 2017 DAU and Standard Agreements.

(d) Obligation to maintain the network in a manner which uses reasonable endeavours to minimise disruption

Concerns have been raised by stakeholders that inadequate protections exist both within the undertaking and the Standard Agreements to prevent deliberate disruption to train services in the implementation of maintenance activities.[938]

For the reasons set out in Chapter 17, the QCA has determined that it is necessary to include in the undertaking an obligation on Aurizon Network to minimise disruptions to train services in planning and implementing operational constraints for the maintenance of the network. The QCA has reviewed, and where appropriate has amended, the relevant arrangements in the Standard Access Agreement and Standard Train Operations Deed for consistency with that obligation.

The QCA has also made amendments to the limitations of Aurizon Network's liability under cl. 28 of the Standard Train Operations Deed and cl. 25 of the Standard Access Agreement to ensure there is clarity that these apply subject to Aurizon Network's obligation to minimise disruptions when maintaining the network. Given the concerns raised by stakeholders on this matter, the QCA considers that greater certainty of obligations is in the interests of access seekers and holders (s. 138(2)(e) and (h)).

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[934] The QCA notes some apparent inaccuracies in relation to the clause references within the collaborative version of the 2017 DAU. For example, the definition of Relinquishment Provisions refers to cl.7.4.9. This should be cls. 7.4.8 and 7.4.9. These inaccuracies have been corrected in the Amended 2017 DAU at Appendix H.

[935] Aurizon Network, sub. 1: 53.

[936] QRC, sub. 20: 35–36, Annexure 4, cl. 12; Pacific National, sub. 19: 14–16; QCoal, sub. 16: 2–3.

[937] Aurizon Network, sub. 26: 6; sub. 40: 276.

[938] QRC, sub. 65: 8–9; Pacific National, sub. 66: 7–8.

Further, the QCA considers it appropriate to include drafting to clarify the operation of the limitations of liability for a failure to make the infrastructure available (or delays to train movements) that are attributable to particular events.[939] This drafting provides that these clauses operate to reduce the potential liability of the relevant party (which may be either Aurizon Network or the access holder/operator depending on the clause) to the extent only that the failure (or delay) was attributable to those events.

The QCA considers this decision is appropriate having regard to the factors outlined in s. 138(2), as it strikes an appropriate balance with the legitimate business interests of Aurizon Network and the interests of access seekers and holders (s. 138(2)(e) and (h)).

(e) Wilful breaches

The QCA has also considered the appropriateness of an 'allowable threshold' in the context of Aurizon Network's revenue adjustment claims under the revenue cap and decided that it should not apply where Aurizon Network has wilfully breached its obligation to minimise disruptions to train services (see Chapter 9).

There is also a default allowable threshold included in the Standard Agreements that provides that Aurizon Network will not be liable if less than five per cent of train services scheduled in the daily train plan in a billing period are cancelled as a result of a failure by Aurizon Network to make the infrastructure available (other than any failures attributable to particular events or circumstances).[940] Consistent with the QCA's decision on revenue adjustment claims, the QCA considers the default allowable threshold under the Standard Agreements should not apply where Aurizon Network has wilfully breached its obligation to minimise disruptions to train services when maintaining the network and the QCA has amended the threshold accordingly.

The QCA notes this exclusion of the default allowable threshold will only apply where the obligation to minimise disruptions to train services is wilfully breached by Aurizon Network, as defined in the Standard Agreements. Where Aurizon Network is applying its railway management expertise to reasonably minimise disruption, such as efficiently managing possessions of the network and applying good operating practice, this exclusion will not apply.

The QCA has made this decision having regard to the factors outlined in s. 138(2) of the QCA Act. The QCA considers this amendment is consistent with the object of Part 5 of the QCA Act (s. 138(2)(a)) because investment in related markets will benefit from knowing Aurizon Network will be liable under the Standard Access Agreement and Standard Train Operations Deed for wilful breaches of its obligations to minimise disruptions to train services when planning and implementing operational constraints. This strikes an appropriate balance between the legitimate business interests of Aurizon Network, and the interests of users and access seekers (s. 138(2)(b), (e) and (h)), noting that whether or not Aurizon Network wilfully breaches this obligation will be entirely within its reasonable control.

(f) Other terms of the Standard Agreements

The following tables outline the QCA's analysis and decision in respect of the terms of the Standard Access Agreement and Standard Train Operations Deed that are not discussed above.

After considering stakeholder submissions and having regard to the factors set out under s. 138(2) of the QCA Act, our decision to either approve or to not approve the 2017 DAU in

[939] See cls. 25.4(b)(iv) and 25.5(c) of the Standard Access Agreement, and cls. 28.4(b)(iv) and 28.5(c) of the Standard Train Operations Deed.

[940] See cl. 24.4(b)(v) of the Standard Access Agreement and cl. 28.4(b)(v) of the Standard Train Operations Deed.

respect of the drafting of the following clauses of the standard Access Agreement and of the standard Train Operations Deed as is set out below in the tables.

A number of the following changes are to correct cross-referencing issues in the documents or in references to third-party documents and bodies. It is in the interests of all parties to ensure that the final documents are corrected to account for these issues (ss. 138(2)(b), (d), (e) and (h)).

In relation to the other minor amendments, the QCA's reasoning for making these changes is set out below.

Standard Access Agreement

Clause[941]	***QCA analysis and decision***
Definitions Aurizon Network has deleted the definition of 'Nominated Unloading Facility' and included a definition of 'Relinquishment Fee'.	Aurizon Network said it has removed the definition of 'Nominated Unloading Facility' for clarity on the basis that it is not used in the Standard Access Agreement.[942] The QCA accepts this and note that this is defined and used in respect of the calculation of the reduction factor provisions under the 2017 DAU, which are incorporated by reference into the Standard Access Agreement, or an Access Agreement that has such incorporation provisions. Aurizon Network said it has included a definition of 'Relinquishment Fee' to reflect its usage in cl. 15.2 of the Standard Access Agreement.[943] The QCA accepts this definition, noting it is defined by reference to the UT5 undertaking.
Definition of 'Ad hoc train service'	Pacific National sought clarification on how ad hoc train services will be treated for take-or-pay purposes. Specifically, whether ad hoc services can offset the take-or-pay of existing contracted services, which it supported.[944] The treatment of ad hoc train services under the Standard Access Agreement is not intended to affect how these are treated for the purposes of the operation of take-or-pay in accordance with Schedule F of the UT5 undertaking, nor the network management principles. The QCA notes cl. 4.8(c) provides that ad hoc train services that have a different origin and destination for the train service type will not be taken into account for the purposes of the take-or-pay charge. The QCA accepts this definition.
Definition of 'Rail Safety Act'	Following submission of its 2017 DAU, Aurizon Network proposed amending the definition of 'Rail Safety Act' (and associated definitions) in the Standard Access Agreement and Train Operations Deed to reflect the current rail safety legislation. The QCA has accepted Aurizon Network's proposed amendments to these definitions.
Clause 3 (Access Undertaking)	The QCA considers that the retention of cl. 3.1(c) of the Standard Access Agreement is confusing and unnecessary. Schedule 4 (specifically item 5) provides for the determination and review of the reference tariff provisions which apply to the Access Agreement. The inclusion of cl. 3.1(c) may conflict with the operation of the Schedule F provisions (which also provide dispute resolution mechanisms). Because of this, the QCA considers that cl. 3.1(c) of the Standard Access Agreement should be deleted. The QCA notes that no submissions further considered this amendment, and accordingly the QCA, having considered the factors in s. 138(2), including the benefit of clarity in drafting, has decided to not approve this clause.

941 Please note, clauses references refer to the relevant Standard Agreement included in Volume 3 of Aurizon Network's 2017 DAU (unless otherwise indicated).
942 Aurizon Network, sub. 1, Appendix P.1: 31.
943 Aurizon Network, sub. 1, Appendix P.1: 31.
944 Pacific National, sub. 19: 23–24.

Clause[941]	*QCA analysis and decision*
Clause 4.8 (Operation of ad hoc train service)	Pacific National queried how the requirement for an operator to have an existing Train Operations Deed would operate in practice, in particular for haulage requirements that arise on short notice (e.g. spot haul) where the access holder wishes to utilise a different operator. It considered this may limit the choice of operator and sought further clarification on this process.[945] The QCA considers it necessary for the operator to have a Train Operations Deed in place in order for it to operate train services on the network (regardless of whether it is a spot haul or not). It is up to the operator to determine how best to make itself available to operate ad hoc train services for potential customers. The QCA accepts this clause.
Clause 24.4 (now cl. 25.4 of the QCA's amended 2017 DAU SAA)	Pacific National said that Aurizon Network's exemption from liability set out under cl. 24.4(b)(i) (now cl. 25.4(b)(i)) should contain a time period in which the relevant train service is to be rescheduled.[946] The QCA does not consider this particular amendment is necessary at present, noting Aurizon Network already has obligations to reschedule train services under the Standard Train Operations Deed (cls. 16 and 21), including to provide reasonable alternative scheduled times for train services affected by operational constraints, having regard to the reasonable requirements of the Operator.
Clause 29 (Suspension) (now clause 30 of the QCA's amended 2017 DAU SAA)	Pacific National said that this section potentially allows Aurizon Network to suspend services with no notice of such suspension. It considered that unless the suspension relates to a safety issue, it would expect at least two business days' notice of impending suspension.[947] The QCA considers the suspension clause proposed by Aurizon Network is appropriate. The QCA considers Pacific National's suggestion would create an additional and unnecessary burden on Aurizon Network, noting parties are aware of the circumstances in which suspensions may occur. The QCA accepts this clause.
Clause 38 (Most favoured nation status) (now clause 39 of the QCA's amended 2017 DAU SAA)	Pacific National considered that this clause should provide an avenue for compensation to be paid to a disadvantaged access holder in the event Aurizon Network has contravened price differentiation limitations.[948] The QCA considers the clause proposed by Aurizon Network provides an appropriate mechanism for an access holder to investigate, and have rectified, access charges developed in contravention of the price differentiation limitations. The QCA does not consider it necessary to include specific provision for the payment of compensation and consider this would be a matter for the parties to negotiate or otherwise determine through dispute resolution. The QCA accepts this clause.
Schedule 7—Access Interface Deed (AID)	The AID is necessary where the access holder is a railway operator that will use the access rights to provide train services for a customer (see cl. 4.4 of the Access Agreement). It establishes a contractual relationship between Aurizon Network and the access holder's customer, setting out each party's liabilities and indemnities to each other. The AID includes certain warranties the customer must give Aurizon Network in respect of ownership of the relevant mine and product being transported (cl. 3 of the AID). The AID includes a new drafting note that, if the customer is unable to give such warranties (i.e. because it is not the relevant owner), Aurizon Network intends to enter into other individual deeds with the parties that can give these warranties.

[945] Pacific National, sub. 19: 24.
[946] Pacific National, sub. 19: 24.
[947] Pacific National, sub. 19: 24.
[948] Pacific National, sub. 19: 24–25.

Clause[941]	QCA analysis and decision
	Aurizon Network said it had included the drafting note for clarity in response to a request from the QRC.[949] The QRC accepted this change.[950] The QCA considers that there should be flexibility in the party that provides these warranties to Aurizon Network, if the customer is unable to do so. The QCA considers that the inclusion of this drafting note is appropriate to provide clarity on the approach Aurizon Network will take in these circumstances. The QCA accepts the introduction of this drafting note. The QCA notes that the AID appears to include the Standard Access Agreement table of contents instead of the AID's table of contents, and that the AID's table of contents appears below the Standard Access Agreement's table of contents. Further, in cl. 3.2 there is an erroneous blank cross-reference which should be a reference to cl. 3.1 of the AID.
Cross-referencing issues (General)	The QCA has also made amendments to correct cross-referencing issues. For example, in cl. 17.1(b) (now cl. 18.1(b)) there is an inconsistency of clause referencing. Reference is made to two kinds of notice, under cls. 10.2 and 10.3 of the Train Operations Deed respectively. However, both cls. 10.2 and 10.3 have two separate notice provisions, and cl. 17.1(b) is inconsistent in which notice it refers to. The reference to cl. 10.2(c) is a reference to the initial notice which precedes a notice to reduce rights. The reference to cl. 10.3(c)(iv)(A)(1) is a reference to the second kind of notice where a reduction of rights occurs. The QCA considers that both instances should refer to the second kind of notice (as this clause envisages a withdrawal of access rights). The QCA considers the clause references to the Train Operations Deed in cl. 17.1(b) should be updated to 'clause 10.2(d)(i) or clause 10.3(c)(iv)(A)(1) (as applicable)'. Likewise, cl. 17.1(c) (now cl. 18.1(c)) lists two similar references to the notice provisions in the TOD, which should be updated to: • in respect of (i), 'clause 10.2(d)(i)'; and • in respect of (ii), 'clause 10.3(c)(iv)(A)(1)'. Further, in cl. 24.3 (now cl. 25.3), the QCA considers the reference to cl. 19.2(a) of a Train Operations Deed should be amended to refer to cl. 21.2(a) of a Train Operations Deed, which contains obligations of Aurizon Network with respect to maintenance of the nominated network.

Standard Train Operations Deed

Clause	QCA analysis and decision
Definitions Aurizon Network has included a number of definitions within the general definitions clause of the Train Operations Deed to refer to the specific clauses within which the terms are defined.[951] These definitions are: • Authorised Parking • Category 1 Reduced Operational Rights	The QCA considers the inclusion of these definitions appropriate, noting they assist clarity by referring to the relevant clause within which these terms are defined. The QRC has also indicated acceptance of these amendments to the definitions.[953] The QCA notes some of these definitions in the 2017 DAU Train Operations Deed contain incomplete cross-referencing. The relevant definitions are: Authorised Parking; Category 1 Reduced Operational Rights; Category 2 Reduced Operational Rights; Chargee; Chargor; Disputed Aspect; Former Interface Risk Provisions; Maximum Gross Mass; New Interface Risk Provisions; and Non-Charging Party. The QCA notes Aurizon Network has proposed corrected cross references,[954] although an issue remains in the definition of Maximum Gross Mass, which

[949] Aurizon Network, sub. 1, Appendix P.1: 33.
[950] QRC, sub. 20, Annexure 1: 34.
[951] Aurizon Network, sub. 1, Appendix P.1: 34.
[953] QRC, sub. 20, Annexure 1: 35–37.
[954] Aurizon Network, sub. 26, Appendix 1.

Clause	QCA analysis and decision
• Category 2 Reduced Operational Rights • Chargee • Chargor • Disputed Aspect • Former Interface Risk Provisions • Maximum Gross Mass • New Interface Risk Provisions • Non-Charging Party • Reference Tariff • Reference Tariff Provisions • Supplier. The definition of Force Majeure has also been amended to correct a previous typographical error.[952] The definition of Noise Code has been amended to refer to the *CQCN Noise Management Guideline*, as opposed to the *QR Code of Practice: Railway Noise Management*.	should be corrected to refer to Schedule 4 of Train Operations Deed. These completed cross-references have been included in Appendix H. With respect to the amended definition of 'Noise Code', Aurizon Network said this definition has been updated, as the QR Code of Practice: Railway Noise Management has been repealed.[955] Aurizon Network said that the *Environmental Protection Act 1994* (Qld) specifically excludes noise from the ordinary use of rail transport infrastructure (see Schedule 1, cl. 1(g) of that Act). Aurizon Network has provided a copy of its *CQCN Noise Management Guideline* and stated that commitments similar to those contained in the former QR Code of Practice are made in the new Guideline. The QCA considers it is appropriate to approve Aurizon Network's amended definition. The QCA notes that the definition contemplates an Authority prescribing a different code of practice and, if so, that prescribed code will be adopted.
Clause 10.1 (Operation of train services)	Pacific National considered an operator should not be required to not operate train services if the access holder does not hold, or have the benefit of, supply chain rights, as the operator will not necessarily have knowledge of whether the access holder has the supply chain rights. It proposed that Aurizon Network should be required to advise the operator if the access holder does not hold supply chain rights.[956] The QCA considers it appropriate for the operator not to operate train services unless the access holder has the benefit of the relevant supply chain rights. The QCA considers it reasonable to expect the access holder and the operator will communicate with each other on whether or not this is the case. The QCA accepts this clause.
Clause 10.3 (Commencement of Train Services for Train Service Type)	This clause sets out the requirements an operator must satisfy to operate train services, including providing for the reduction of operational rights if the operator does not comply with these requirements. If operational rights are reduced, the clause provides that Aurizon Network may allow the access holder to nominate an alternative operator to utilise the reduced operational rights (cl. 10.3(c)(iv)(A)(2)). The QCA considers this clause should be amended by providing that Aurizon Network must allow an access holder to nominate an alternative operator to utilise the reduced operational rights. This will provide certainty for an access holder that it will be able to nominate an alternative operator in accordance with the provisions of its access agreement. The QCA considers that the legitimate business interests of Aurizon Network will not be hindered by allowing an access holder to nominate a

952 Aurizon Network, sub. 1, Appendix P.1: 35.
955 Aurizon Network, sub. 1, Appendix P.1: 35.
956 Pacific National, sub. 19: 25.

Clause	QCA analysis and decision
	replacement operator and that the interests of access holders will be served by providing continued access to the declared service through an (approved) alternative operator.
Clause 13.2 (Train control rights and obligations – Aurizon Network)	Pacific National considered this clause should be strengthened to reflect the importance of Aurizon Network's responsibilities and proposed inclusion of additional obligations.[957] The QCA considers the clause proposed by Aurizon Network is appropriate. Given the nature of this clause, the QCA does not consider the inclusion of the broad obligations proposed by Pacific National to be appropriate. The QCA considers these are better reflected elsewhere in the train operations deed, noting Aurizon Network's notification obligations with respect to incidents (cl. 16.4) and its broader obligations with respect to interface management and coordination. The QCA accepts this clause.
Clause 20 (Performance Levels)	The clause currently provides that the only consequences of a failure to meet performance levels will be as set out in cl. 20. However, performance levels (including financially based incentives and sanctions) are to be negotiated by the parties in accordance with schedule 5 of the Train Operations Deed and any financial consequence will be governed by cl. 5.7 of the Standard Access Agreement. The QCA considers this clause should be amended to clarify that it does not exclude any consequences as set out in the Access Agreement.
Clause 21.2 (Maintenance of the nominated network)	Pacific National considered the focus of this section should be broadened to include the safe use of the network in addition to standards and train service operation.[958] As discussed in more detail above, the QCA does not consider it appropriate to approve Aurizon Network's drafting of these provisions and requires that amendments be made as is set out in Appendix H.
Clause 22.4 (Management of incident response)	Pacific National considered this clause should clarify that the incident site should not be disturbed unless both Aurizon Network and the operator have had the opportunity to complete appropriate investigations of the incident site.[959] The QCA considers the clause proposed by Aurizon Network is appropriate and have concerns that Pacific National's suggested amendment may not be practical from a safety and operational perspective. The QCA accepts this clause.
Clause 28.4 (Claims and exclusions in respect of non-provision of operational rights)	This clause sets out Aurizon Network's liability in respect of the non-provision of operational rights under the Train Operations Deed. As discussed above, the QCA does not consider it appropriate to approve Aurizon Network's drafting of this clause and requires that amendments be made as is set out in Appendix H. In addition, the QCA also requires that the cross-reference to cl. 28.4(b)(i) in cl. 28.4(a) be amended so that Aurizon Network's exclusion of liability applies subject to all of the circumstances set out in cl. 28.4(b). This is consistent with the equivalent clause set out in the Standard Access Agreement (cl. 25.4).
Cross Referencing issues (General)	The QCA has also made amendments to correct cross-referencing issues. For example, cl. 33.2(a) provides for the termination of the Train Operations Deed by Aurizon Network. The QCA requires the cross-reference to cl. 31.2(b) in cl. 33.2(a) to be amended to refer to cl. 33.2(b), which provides

957 Pacific National, sub. 19: 25.
958 Pacific National, sub. 19: 25.
959 Pacific National, sub. 19: 25.

Clause	***QCA analysis and decision***
	that Aurizon Network may only exercise its right to terminate the deed for an event if it has first exercised any rights to suspend the deed in respect of that event.

15 PRICING PRINCIPLES

15.1 Aurizon Network's 2017 DAU proposal

Part 6 of Aurizon Network's 2017 DAU sets out the pricing principles Aurizon Network proposed to apply when developing access charges[960] and reference tariffs.[961]

The 2017 DAU outlines Aurizon Network's proposed general pricing principles:

- price differentiation—which limits price differentiation between users (cls. 6.2–6.5)
- pricing limits—which establishes upper and lower limits for access charges (cl. 6.6)
- rail infrastructure utilisation—which provides for Aurizon Network to vary access charges when available capacity is limited. This principle applies only to non-coal-carrying train services (cl. 6.7)
- revenue adequacy—which provides for Aurizon Network to earn sufficient revenue to at least recover the efficient costs of providing access including an appropriate return on its assets (cl. 6.8).

Part 6 of the 2017 DAU also sets out the processes to identify or develop access charges for new coal-carrying train services (cl. 6.3), including those that involve an expansion (cl. 6.4) and/or new mine-specific spur lines (cl. 6.4.10). In identifying and/or developing reference tariffs for expansions, Aurizon Network must adhere to the expansion pricing principles (section 15.3).

Clause 6.12 requires that Aurizon Network maintain the regulatory asset base (RAB) in accordance with Schedule E. The RAB reflects the asset value of the CQCN. Schedule E of the 2017 DAU sets out the provisions regarding maintenance of the RAB and the assessment and approval of capital expenditure for inclusion into the RAB. Schedule E also provides for a customer voting process for proposed capital expenditure projects.

The pricing principles proposed in Aurizon Network's 2017 DAU are largely unchanged from Aurizon Network's existing arrangements. The key changes from the 2016 Undertaking include:

- modifying the scope of what is considered an access condition, and therefore what requires the QCA's approval (cl. 6.13.1(a) and the definition of 'Access Conditions')
- removing the process for the negotiation of access conditions, including the requirement to prepare an access conditions report and changes to the QCA's approval process (cl. 6.13.2)
- modifying prohibited access conditions (cl. 6.13.3).

During the collaborative submission process, stakeholders[962] reached consensus that Aurizon Network's 2017 DAU should be amended to revise provisions relating to access conditions (section 15.7).

[960] An access charge is the price paid to Aurizon Network for providing access. This also includes take-or-pay charges, revenue cap adjustments, charges and penalties associated with the operation of a train service on the rail infrastructure. It also includes the amounts paid to Aurizon Network in accordance with any access conditions, studies funding agreement, user funding agreement or rail connection agreement that are included in the cost build-up for reference tariffs.

[961] A reference tariff includes system reference tariffs and expansion tariffs calculated for a reference train service.

Key issues identified during the QCA's investigation

The QCA has considered all elements of Part 6 and Schedule E of Aurizon Network's 2017 DAU proposal in making this decision. The following issues attracted comment from stakeholders, or have been identified for further consideration:

- general pricing principles (section 15.2)
- the expansion pricing framework (section 15.3)
- maintenance of the RAB, particularly treatment of asset disposals and triggers for adjustment of the RAB (section 15.4)
- QCA approval of capital expenditure (section 15.5)
- the customer voting process for acceptance of capital expenditure (section 15.6)
- access conditions (section 15.7).

15.2 General pricing principles

Aurizon Network's 2017 DAU proposal

Aurizon Network's 2017 DAU sets out general pricing principles as follows:

- Price differentiation—Aurizon Network will not differentiate access charges between access seekers and access holders and will not set prices that discriminate in favour of related parties. However, Aurizon Network may negotiate a reasonable access charge where there is no applicable reference tariff to account for differences in cost or risk (cl. 6.2).
- Pricing limits—access charges for individual train services or combination of train services are between the incremental costs of providing access for the relevant train services and the stand-alone costs of providing access for the relevant train services; reference tariffs for the stand-alone cost would be based on the MAR (cl. 6.6.3).
- Rail infrastructure utilisation—Aurizon Network may vary access charges for non-coal-carrying train services when available capacity is limited (cl. 6.7.1).
- Revenue adequacy—Aurizon Network is entitled to earn revenue at least enough to meet efficient costs and provide an appropriate rate of return (cl. 6.8).[963]

QCA analysis and decision

Summary of decision 15.1

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of the general pricing principles.**

Stakeholders did not raise any issues with respect to general pricing principles. The QCA considers that it is appropriate to approve the general pricing principles in Part 6 of Aurizon Network's 2017 DAU. The general pricing principles are in the interests of access seekers and access holders, as they promote the efficient costs of providing access (ss. 138(2)(e) and (h)) and provide certainty and confidence that promotes efficient investment (s. 138(2)(a)).

[962] Collaborative submissions from Aurizon Network (sub. 26: 3, 7 and Appendix 1), the QRC (sub. 29: 2 and Annexures 1 and 2) and Pacific National (sub. 28: 1) supported consensus amendments to the 2017 DAU.
[963] Aurizon Network, sub. 1, 2017 DAU mark-up.

Part 6 also appropriately balances the s. 168A principles (s. 138(2)(g)), including providing price discrimination where it aids efficiency, but also prohibiting discrimination that favours the related party operations of Aurizon Network. This is also in the interests of access seekers and access holders. It also serves Aurizon Network's interests by providing for the recovering of its efficient costs in providing access and in earning a return on investment commensurate with the regulatory and commercial risks involved.

15.3 Expansion pricing framework

Aurizon Network's 2017 DAU proposal

The following principles underpin expansion pricing (cl. 6.4.1):

- Expanding users (an access seeker or access holder who seeks access rights for coal-carrying train services that require expansion) should generally pay an access charge that reflects at least the incremental costs (capital and operating) of providing additional capacity.
- Non-expanding users should not experience a material increase in access charges due to an expansion.
- If expanding users face higher access charges than non-expanding users, it is generally acceptable for expanding users to not contribute to Aurizon Network's common costs.
- Allocating some of the expansion costs to non-expanding users may be appropriate if the expansion has clear benefits to those users.

Clause 6.4 of Aurizon Network's 2017 DAU also provides a process for establishing which pricing arrangements apply to the expansion. This process involves a sequential assessment described by the following:

- Consensus expansion—if expansion stakeholders agree to the pricing arrangements, those pricing arrangements will apply (cl. 6.4.2).
- Endorsed expansion—if consensus between expansion stakeholders is not achieved and there are no substitutable train services[964], the pricing arrangements are decided using a predetermined methodology that satisfies the expansion pricing principles (cl. 6.4.3(c)).
- Customised expansion—if consensus between expansion stakeholders is not achieved and there are substitutable train services, tailored pricing arrangements that satisfy the expansion pricing principles will apply (cl. 6.4.3(d)).

QCA analysis and decision

Summary of decision 15.2

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of the expansion pricing framework.**

While Aurizon Network's expansion pricing framework is consistent with existing arrangements in the 2016 Undertaking[965], stakeholders raised specific concerns in submissions on the 2017 DAU.

[964] In the case of expansion, substitutable train services means that the access holder of those services has train service entitlement(s) created by the expansion that can be used instead of the train service entitlement(s) related to the existing capacity.

Allocation of expansion costs to non-expanding users where an expansion has clear benefits to those users

Pacific National said it has concerns with this principle, as users who have not sought an expansion and who have not agreed to fund an expansion may be required to partially fund an expansion. Pacific National said the issue is of particular concern where the benefits are not verified by a third party and/or are based on Aurizon Network scheduling and planning train operations in a specific manner, which results in the expansion appearing to benefit users who did not seek the expansion or agree to fund the expansion. Pacific National said this principle should be removed.[966]

Anglo American submitted that expansion pricing should be considered on a 'case-by-case' basis, to take account of where it is not clear whether the expansion is triggered by new users and whether existing users will benefit by way of more capacity.[967]

The QCA notes that when determining access charges for a new coal-carrying train service, access undertakings for the CQCN have generally benefited existing train services. Underpinned by the 'average down' principle, these provisions share tariff reductions between new and existing train services, if doing so lowers the reference tariff of existing train services. In addition, provisions have generally allocated a portion of common costs to new train services, again to the benefit of existing of train services.

The QCA considers it appropriate that non-expanding users are allocated a portion of expansion costs if there is a genuine benefit to them. Potential benefits are assessed on a case-by-case basis, for example, to identify where non-expanding users might benefit from the expansion if the capacity available to them and/or reliability increases, holding operating assumptions constant.

The QCA considers that this approach appropriately balances the interests of access seekers and access holders (ss. 138(2)(e) and (h)). By ensuring that costs are appropriately allocated between relevant parties, it also promotes the efficient investment in infrastructure (s. 138(2)(a)). Further, the approach is consistent with the pricing principles set out in s. 168A of the QCA Act (s. 138(2)(g)), specifically that revenue should be at least enough to meet the efficient costs of providing the service (to expanding and non-expanding users).

Expansion pricing approach

Anglo American submitted that the nature of an expansion should first be considered before applying the 'incremental up/average down' test used by the QCA in the past. Anglo American said that to apply a pricing impact test in any situation means existing users are exposed to cross-default risk in the future, should new user(s) (competitors) not produce the required volumes.[968]

The QCA notes that in making its determination under the expansion pricing framework, it must have regard to the factors under s. 138(2) of the QCA Act. This means that if there are material changes after an endorsed expansion is approved, the QCA must consider the approved pricing proposal in light of these changes, including where an endorsed expansion includes an incremental up/average down test. This requirement affords an expansion stakeholder with certainty that the QCA will consider the matters raised before it on a case-by-case basis.

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[965] Aurizon Network, sub. 1, 2017 DAU mark-up.
[966] Pacific National, sub. 19: 22.
[967] Anglo American, sub. 18: 16.
[968] Anglo American, sub. 18: 16.

Common cost contribution by expanding users

Anglo American submitted that, in assessing whether an expansion might provide a new and higher tariff than the existing reference tariff, a portion of common costs should also be included in the new expansion tariff.[969]

Pacific National said that a zero contribution from expanding users—if they face a higher cost than non-expanding users—is not generally acceptable. It proposed that expanding users should make a contribution to common costs, although this could be less than the contribution made by non-expanding users.[970]

Anglo American considered that the true test of whether the expansion tariff for a particular mine haul is able to accommodate a portion of common cost is whether that expansion tariff is actually higher on a dollar per net tonne basis, rather than the reference tariff of an existing user with the longest haul to that same unloading destination and adjusting for differences in train characteristics.[971]

If the expansion access charge for a particular mine load-out (before adding a portion of common costs) is lower than an existing mine's access charge, all things being equal, then under the average down principle, the new train services are making a positive contribution to the common costs of the system.

Where expanding users already pay access charges that are higher than the access charges faced by existing users, a requirement to also pay a contribution to the system's common costs could impose an additional burden that unnecessarily dissuades future investment. The QCA considers a zero contribution to common costs from expanding users to be consistent with the object of Part 5 of the QCA Act, as it promotes efficient investment in the CQCN. In addition, a zero contribution to common costs from expanding users would not affect the access charges to existing users and they would therefore not be worse off.

Moreover, where expanding users already pay access charges that are higher than those faced by existing users, a zero contribution to common costs from expanding users appropriately balances the interests of access seekers and access holders (ss. 138(2)(e) and (h)). It also recognises Aurizon Network's legitimate business interests, as it does not adversely affect Aurizon Network's ability to earn revenue that reflects its efficient cost of providing access including an appropriate rate of return (ss. 138(2)(b) and (g)).

15.4 Maintenance of the regulatory asset base

Clause 6.12 of the 2017 DAU specifies that Aurizon Network will maintain the RAB in accordance with Schedule E.

Part 1 of Schedule E of the 2017 DAU sets out the general principles for the ongoing maintenance and updating of the RAB, including the circumstances under which the RAB value is rolled forward and adjusted. Provisions also apply for reporting capital expenditure and RAB roll-forward, and including equity-raising costs in the RAB.

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[969] Anglo American, sub. 18: 17.
[970] Pacific National, sub. 19: 22.
[971] Anglo American, sub. 18: 17.

15.4.1 RAB roll-forward

Aurizon Network's 2017 DAU proposal

The 2017 DAU proposed that the RAB is rolled forward each year using an opening value at the first year of the term of the UT5 undertaking, and is adjusted to take account of inflation, depreciation, asset disposals and the addition of prudent and efficient capital expenditure.

Asset disposals

Aurizon Network proposed that where an asset disposal results from an expansion of, or maintenance work on, rail infrastructure, the RAB would be reduced by the net proceeds of the sale of the asset (cl. 1.1 of Schedule E). Aurizon Network's view was that this approach would expedite the treatment of asset disposals and would ensure that the benefit of any net proceeds from the sale of assets will accrue to Aurizon Network's customers.[972]

Aurizon Network considered that a case-by-case approval mechanism creates unnecessary regulatory risk and uncertainty. It provided an example where the remaining undepreciated value of a culvert replacement would not be included in the RAB until an *ad hoc* approval from the QCA, which could lead to delays in funding the expenditure.[973]

Indexation

Aurizon Network's 2017 DAU proposed that the opening value would be indexed using forecast CPI that was used for the purpose of determining the relevant reference tariff for the relevant year.[974]

QCA analysis and decision

Summary of decision 15.3

- **The QCA considers the appropriate way for Aurizon Network to amend its 2017 DAU (Schedule E) concerning asset disposals is to reflect the clarifying drafting agreed between Aurizon Network and the QRC, as submitted in their respective collaborative submissions.**
- **The QCA's decision is to require amendment to Aurizon Network's 2017 DAU (Schedule E) treatment of RAB indexation for the roll-forward process. These amendments are discussed in Chapter 4.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in cls. 1.1(a) and 1.1(c) of Schedule E of the Amended 2017 DAU at Appendix H.**

Asset disposals

Aurizon Network's 2017 DAU proposals for asset disposal arrangements suggested that the net sales proceeds from asset disposals would be deducted from the cost of the expansion or maintenance work before the latter is included in the RAB.[975] While this may be the effect in practice, it could also be the case that the RAB itself is adjusted by the sales amount, given that

[972] Aurizon Network, sub. 1: 90–91.
[973] Aurizon Network, sub. 1: 90.
[974] See Chapter 4 on the forecast inflation deducted from Aurizon Network's revenue allowance and the inflation rate used in the RAB roll-forward.
[975] Aurizon Network, sub. 1: 90–91.

the timing of an expansion or maintenance work may vary from that of the subsequent asset disposals.[976]

The QRC accepted Aurizon Network's proposal, but also provided further minor amendments to clarify that the disposal 'necessarily' results from an expansion or maintenance work, and that any sale would be on an arm's length basis.[977] In collaborative submissions, Aurizon Network and Pacific National accepted the QRC's clarifying amendments.[978] These amendments are also considered appropriate by the QCA.

The QCA accepts as a general principle that Aurizon Network should be compensated for the net undepreciated value of an asset that is prudently and efficiently replaced by a new asset as part of an expansion or changes in maintenance. Any sale proceeds should be offset from the remaining undepreciated amount, and it is agreed that such sales should be on an arm's length basis to reflect a market value. It is noted that the timing of disposals would need to be recorded to ensure a correct adjustment to the RAB, particularly where disposals occur later than the expansion or maintenance work.

It is considered that, by providing certainty and allowing timely recognition of undepreciated amounts, Aurizon Network's 2017 DAU proposal meets the s. 138(2)(a) criterion to promote the efficient investment in infrastructure. The process should avert the scenario identified by Aurizon Network where an investment in new upgraded facilities could potentially be delayed. Also, because of improved clarity and certainty, and by providing a streamlined process for determining asset disposal adjustments, the proposed process is in the interests of Aurizon Network (s. 138(2)(b)) and access holders (s. 138(2)(h)).

Indexation

The QCA requires amendments as discussed in Chapter 4 relating to indexation of the RAB.

15.4.2 Adjusting the value of assets in the RAB

Aurizon Network's 2017 DAU proposal

The 2017 DAU proposed that the QCA may reduce the value of assets in the RAB under certain conditions (cl. 1.2 of Schedule E). These include:

- where the QCA made an initial decision to include the assets into the RAB on the basis of information provided by Aurizon Network that Aurizon Network knew to be false or misleading at the time it provided the information
- circumstances where demand has deteriorated to such an extent that regulated prices on an unoptimised asset would only exacerbate the demand decline (and the associated revenue impacts for Aurizon Network), and that the demand reduction is long-term and sustained
- where a condition-based assessment reveals that Aurizon Network has not maintained its assets in accordance with, among other things, prudent and good operating practices.

Aurizon Network submitted that cl. 1.2(b) of its 2016 Undertaking provides the QCA with the ability to reduce the RAB for any of three triggers but does not detail how the amount of reduction would be determined. It proposed including a provision that the RAB would only be adjusted by the amount necessary to allow for that trigger. For example, if inaccurate

[976] Aurizon Network, sub. 1, 2017 DAU mark-up.
[977] QRC, sub. 20, Annexure 1: 26.
[978] Aurizon Network, sub. 26: 8; Pacific National, sub. 28: 2.

information was provided that resulted in a $10 million value being included in the RAB, when $8 million should have been included, the RAB value should be adjusted by the net amount, that is, $2 million.

Aurizon Network also submitted that 'inadequate' information should not be a trigger. Aurizon Network stated that if the QCA included a value in the RAB, therefore having determined that the information is 'adequate', it should not be able to later decide that information provided to it was 'inadequate'.[979] Aurizon Network therefore amended cl. 1.2(b) of the 2016 Undertaking by removing the word 'inadequate'.

QCA analysis and decision

Summary of decision 15.4

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of adjusting the value of the RAB.**

The QCA considers optimising assets due to demand deterioration should occur after steps are made by Aurizon Network to negotiate with its customers on solutions for addressing the CQCN's long-term viability. Aurizon Network has the opportunity if necessary to adjust prices in consultation with its customers to avert a reduction in the RAB.

Provisions are also included for the RAB to be subsequently increased for reinstated assets where demand has improved sufficiently or where the asset condition has been restored to the standard required.

Aurizon Network's 2017 DAU proposals to clarify the reduction in the RAB in response to any of the three triggers are consistent with the QCA's policy position. That is, the adjustment would only reflect the amount attributed to the specific trigger. The QCA agrees that the intent of the provisions should not be to make an adjustment by a different amount. Aurizon Network's 2017 DAU therefore provides clarity and regulatory certainty.

In regard to the removal of the term 'inadequate', the QCA accepts Aurizon Network's comments. However, for clarity, in circumstances where there was available information that was not known to the QCA and was later found to have been withheld, this would be considered to be 'misleading' behaviour.

The QRC also accepted Aurizon Network's 2017 DAU proposals.[980]

By providing clarity and certainty about the circumstances when the QCA would trigger an asset revaluation, the 2017 DAU proposals are considered to provide an appropriate balance in terms of the s. 138(2) factors, including the object to promote efficient investment (s. 138(2)(a)), the legitimate business interests of Aurizon Network (s. 138(2)(b)), the interests of access seekers (s. 138(2)(e)), and the interests of access holders (s. 138(2)(h)).

Consistency with line diagrams

Anglo American submitted that the QCA should require the RAB to be in line with the current line diagrams. Anglo American said there should be an obligation for Aurizon Network to facilitate an independent audit of RAB assets. The independent assessor would be appointed by the QCA and would provide a report within six months of the commencement of UT5. Anglo

[979] Aurizon Network, sub. 1: 89–90.
[980] QRC, sub. 20, Annexure 1: 27.

American suggested this approach would ensure that amendments to line diagrams are reflected in the RAB. It did not anticipate that it would be an expensive or time-consuming process; it would be a natural part of developing the MAR at the start of each regulatory period.[981]

The QCA does not propose a major review of the RAB to align it with the line diagrams. The RAB has been rolled forward over a number of years and adjusted annually for new capital expenditure, asset depreciation and disposals that have been subject to approval by the QCA. Given that the RAB and associated capital expenditure assessment processes have been developed on a system, rather than line section, basis, this proposal would be an expensive and time-consuming process that would not be in the interests of Aurizon Network, access seekers or access holders and would not otherwise provide any benefit to the regulatory framework (ss. 138(2)(b), (e) and (h)).

Anglo American's concern with respect to asset write-offs[982] is already addressed in the capital expenditure assessment process. In the absence of any specific asset items being identified of concern, the QCA does not consider at this stage that the benefits of such a review justify the costs.

15.4.3 Reporting capital expenditure, RAB roll-forward and equity raising costs

Aurizon Network's 2017 DAU proposal

Clause 1.3 of Schedule E contains requirements for reporting the capital expenditure and RAB roll-forward to the QCA. Under the provisions, Aurizon Network is to provide information on capital expenditure sufficient for the QCA to determine prudency and efficiency within four months of the end of each year of the term. Roll-forward of the RAB then occurs within one month of the QCA's acceptance of the capital expenditure report.

Clause 1.4 of Schedule E allows for the inclusion of equity raising costs into the RAB, reasonably required to maintain the benchmark capital structure of 55 per cent debt and 45 per cent equity.

QCA analysis and decision

Summary of decision 15.5

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of reporting capital expenditure, RAB roll-forward processes and inclusion of equity raising costs.**

Aurizon Network’s 2017 DAU approach to reporting of capital expenditure and RAB roll-forward is consistent with the legitimate business interests of Aurizon Network (s. 138(2)(b)), as it enables a recovery of prudent and efficient costs. It therefore is consistent with the pricing principles (s. 138(2)(g)) to generate sufficient revenue, and it promotes efficient investment in infrastructure (s. 138(2)(a)). By ensuring prudency and efficiency, there is a balance between the interests of Aurizon Network and those of access seekers and access holders (s .138(2)(e) and (h)).

[981] Anglo American, sub. 18: 22.
[982] Anglo American, sub. 18: 8.

15.5 Approval of capital expenditure by the QCA

Aurizon Network's 2017 DAU proposal

Under Part 2 of Schedule E of the 2017 DAU, Aurizon Network is to obtain the QCA's approval for capital expenditure prior to including it in the RAB. Part 2 sets out a process for this.

Under cl. 2.2, the QCA determines the prudency and efficiency of capital expenditure by taking account of the scope and standard of works, and considering whether the costs are prudent and efficient. Various matters are taken into account, including the relevant Network Development Plan, the need to accommodate current and future demand, and the age and condition of existing assets. The efficiency of costs is assessed taking into account the scale, nature, cost and complexity of the project, the market circumstances for construction inputs, and compliance and timing requirements. In considering prudency and efficiency, the QCA will take account of circumstances prevailing at the time the decision to invest was made. This provides regulatory certainty should there be a change in market circumstances after the decision to invest.

The QCA must also take account of the outcomes of any customer voting proposal when considering prudency and efficiency.

Clause 2.3 provides a process for approval that is designed to enhance transparency and confidence in maintaining the RAB. This includes providing sufficient notice to Aurizon Network or user funders if the QCA is considering refusing to include new capital expenditure into the RAB. New capital expenditure also covers the costs of concept, pre-feasibility and feasibility studies.

Aurizon Network has discretion to submit an Asset Management Plan (AMP) to the QCA for approval, which sets out the standards Aurizon Network will apply in determining whether to incur capital expenditure by replacing assets within the RAB, rather than maintaining those assets (Part 3 of Schedule E). Aurizon Network is also able to request the QCA's acceptance of the capital expenditure for asset replacement and renewal included in the AMP as prudent and efficient.

QCA analysis and decision

Summary of decision 15.6

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of approval of capital expenditure.**

Anglo American submitted that a robust capital expenditure approval process is required.[983] It said:

- *ex ante* approaches avoid reviewing capital expenditure claims after the event and allow iterative and proactive involvement by those underwriting the project[984], but can also create incentives for Aurizon Network to inflate cost estimates and deliver projects to a lower standard or reduced scope from that on which the budget was set[985]

[983] Anglo American, sub. 18: 22; Anglo American, sub. 57: 5.
[984] Anglo American, sub. 18: 22–23.
[985] Anglo American, sub. 57: 5–6.

- *ex post* annual assessments were more likely to promote the efficient investment in infrastructure given concerns over the lack of detail about forecast capital expenditures.[986]

Anglo American also said introducing a group like the ARTC Hunter Valley Rail Capacity Group would improve efficiency through driving transparency and facilitating Aurizon Network gaining greater input from stakeholders (irrespective of the approach taken).[987]

The QCA considers that *ex post* approvals of capital expenditure are intended to promote economically efficient investment in infrastructure and can provide an incentive for Aurizon Network to achieve efficiencies—but that an incentive-based *ex ante* approval process could be structured to provide a cost efficiency incentive for Aurizon Network.[988]

The QRC noted two key issues would need to be addressed before implementing an incentive-based approach for renewals capital expenditure: how to ensure that Aurizon Network is not rewarded for under-delivering on the scope or standard of projects, and how to ensure that budgeted costs are not inflated.[989]

The QRC considered that the QCA should have the ability to reconsider a decision to approve capital expenditure into the RAB if a capacity shortfall in respect of an expansion is determined.[990] The QRC submitted that if significantly less capacity is produced from an expansion, the relevant expenditure may no longer be considered prudent and efficient.[991] The QRC proposed adding a cl. 1.2(b)(iv) to Schedule E, to allow the QCA to reduce the value of assets in the RAB if a capacity shortfall occurs in an expansion and the QCA's decision to approve the capital expenditure would have been different.[992] Aurizon Network clarified that it did not agree with the QRC's proposed amendment.[993]

The QCA considers that the scenario presented by the QRC is already adequately accommodated under Aurizon Network's 2017 DAU. That is, if the expansion shortfall was attributable to misleading information, the QCA may require a reduction in the RAB. Otherwise, the arrangements set out in Part 8 of the 2017 DAU provide a process for addressing a capacity shortfall. The QRC's proposed amendment would only add complexity and uncertainty to existing provisions.

Aurizon Network's approach promotes efficient investment in infrastructure (s. 138(2)(a)). The proposed Asset Management Plan provisions also promote efficient investment in infrastructure (s. 138(2)(a)). By ensuring prudency and efficiency, there is a balance between the interests of Aurizon Network (s. 138(2)(b)) and those of access seekers and access holders (ss. 138(2)(e) and (h)).

15.6 Acceptance of capital expenditure by interested participants

Schedule E provides a process for a broad range of interested participants to provide their views on a particular proposed capital expenditure, by voting whether or not they accept the project.

986 Anglo American, sub. 57: 6.
987 Anglo American, sub. 57: 5–6.
988 For renewals capital expenditure only.
989 QRC, sub. 53: 9.
990 QRC, sub. 20: 30.
991 QRC, sub. 20: 30.
992 QRC, sub. 20, 2017 DAU mark-up.
993 Aurizon Network, sub. 26: 8.

Aurizon Network's 2017 DAU proposal

Application of the customer voting process

Part 4 of Schedule E of the 2017 DAU sets out a voting process for access holders, customers and access seekers to provide their views on the prudency and efficiency of the scope, standard or cost of the capital project.

To inform the customer vote, Aurizon Network proposed to provide relevant information, such as the feasibility study on the capital project to the QCA and interested participants. Aurizon Network proposed to promptly inform the QCA when it seeks a customer vote and the outcome of that vote.

Compared to Aurizon Network’s 2016 Undertaking, Aurizon Network has proposed a minor clarification to ensure that the voting process recognises the binding nature of the voting in cl. 2.1(f) of Schedule E. This clarification in cl. 4.1(a) was requested by the QRC during the finalisation of the 2016 Undertaking, and was agreed upon at the time.[994]

Interested participants

Clause 4.2 of Schedule E identifies interested participants as customers, access holders and access seekers where:

- the access charges relevant to the person are determined by reference to a reference tariff and would be affected by including the capital expenditure into the RAB
- the proposed capital expenditure will impact on the person's contracted capacity or train paths after construction is completed.

Potential interested participants may notify Aurizon Network and the QCA providing reasons they are entitled to participate.

Voting rights of interested participants

The voting rights of an interested participant will reflect that interested participant's train paths as a proxy for the service provided (cl. 4.3 of Schedule E). Schedule E also sets out how the train paths would be determined.

Voting and acceptance process

The legitimacy and effectiveness of the voting process is served when voting intentions are clear. In Schedule E, cl. 4.4 requires that 'no' votes be accompanied by sufficient detailed reasons so that the QCA can understand these reasons, while for a 'yes' vote, interested participants may, but are not required to, provide reasons. The voting proposal is deemed accepted where interested participants accounting for at least 60 per cent of affected train paths voted 'yes'.

Information relating to acceptance votes

Aurizon Network proposed under cl. 4.5 to provide relevant information, including the results of a pre-feasibility study and feasibility study (unless interested participants agree that the pre-feasibility study is sufficient information). However, any scope changes after the pre-feasibility study could change the list of interested participants considered eligible to vote.

[994] Aurizon Network, sub. 1, Appendix P.1: 28.

Aurizon Network may require an interested participant to sign a confidentiality agreement substantially in the form set out in Schedule I, prior to providing information in relation to a customer vote on a voting proposal.

Compliance and auditing

Clause 4.6 of Schedule E sets out compliance and auditing provisions for the voting process. Aurizon Network proposed to take whatever action is reasonably required to comply with the customer voting process in response to concerns regarding possible non-compliance, received in writing, from interested participants. Interested participants are also required to notify the QCA, in writing, of its concerns.

Aurizon Network also must procure an audit of the voting procedure. If the auditor identifies flaws in the calculation of affected train paths, Aurizon Network must recalculate the affected train paths and recount the votes. If there are material flaws in the voting process, Aurizon Network must redo the vote.

QCA analysis and decision

> **Summary of decision 15.7**
>
> - **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of the application of the customer voting process.**

The QRC supported Aurizon Network's proposed cl. 4.1(a) of Schedule E.[995]

The 2017 DAU approach to the voting process is consistent with the legitimate business interests of Aurizon Network (s. 138(2)(b)), as it enables an appropriate scoping of the services required by participants. It therefore is also consistent with promoting efficient investment in infrastructure (s. 138(2)(a)). By ensuring prudency and efficiency, there is a balance between the interests of Aurizon Network and those of access seekers and access holders (ss .138(2)(e) and (h)).

15.7 Access conditions

Aurizon Network’s 2017 DAU proposal

Clause 6.13 of the 2017 DAU provides for Aurizon Network and an access seeker to agree access conditions and submit these for the QCA’s approval.

Aurizon Network and an access seeker may agree to access conditions, provided these have no effect until approved by the QCA (cl. 6.13.1). The QCA must approve the access conditions, unless it is satisfied that the access conditions (cl. 6.13.2):

- will, in relation to the provision of access, materially disadvantage access seekers or access holders who will be directly affected by the access conditions but will not be parties to the agreements containing the access conditions, or
- contravene the QCA Act.

Clause 6.13.3 of the 2017 DAU sets out the following prohibited access conditions that cannot be imposed by Aurizon Network or approved by the QCA:

[995] QRC, sub. 20, Annexure 1: 28.

- any access condition that restricts access seekers from raising disputes with the QCA or disclosing proposed access conditions or other contract terms to the QCA
- any access condition that requires access seekers or access holders to disclose information that is confidential to one or more of them, or to any other access holder or access seeker, in circumstances other than those permitted by the undertaking.

While the 2017 DAU access conditions provisions were developed from its existing arrangements in the 2016 Undertaking, Aurizon Network's 2017 DAU proposed various changes.

2017 DAU access conditions—key differences compared to the 2016 Undertaking

Aurizon Network's 2017 DAU proposed the following key changes to access conditions, as compared to the 2016 Undertaking:

- changing the definition of access conditions, most notably limiting the application of access conditions provisions to conditions that meet certain materiality thresholds
- not including the process for the negotiation of access conditions, including the obligation on Aurizon Network to issue an access conditions report detailing, among other things, quantification of the additional costs or risks Aurizon Network is exposed to which it is seeking to mitigate, and why Aurizon Network's exposure to the additional risks would not be mitigated through other specified means (see cls. 6.13.2(a)–(d) of the 2016 Undertaking)
- changes to the circumstances in which the QCA may refuse to approve proposed access conditions, such as no longer allowing the QCA to refuse approval if it is satisfied the proposed access conditions are contrary to the public interest (see cl. 6.13.2(e) of the 2016 Undertaking)
- omitting the process for the QCA to consider proposed access conditions in the event that only some or none of the access seekers agree to access conditions sought by Aurizon Network (see cls. 6.13.2(f)–(g) of the 2016 Undertaking)
- changing the list of prohibited access conditions to not permit an access condition that results in Aurizon Network earning an access charge based on a varied WACC, or otherwise earning the return provided by reference tariffs based on the approved WACC (other than as approved by the QCA) (see cl. 6.13.3 of the 2016 Undertaking).

QCA analysis and decision

Summary of decision 15.8

- **The QCA's decision is that the access condition provisions in Aurizon Network's 2017 DAU be amended to reflect the consensus drafting agreed between Aurizon Network and the QRC, as submitted in their respective collaborative submissions. The amendments clarify, among other things, that:**
  - **(a) the access conditions clause only applies to coal-carrying train services**
  - **(b) access conditions may include other monetary considerations (not only access charges), whether levied under an access agreement or otherwise**
  - **(c) Aurizon Network will issue an access conditions report to access seekers, customers and the QCA detailing the access conditions, quantification of additional costs and risks, and reasons that Aurizon Network's risks are not otherwise mitigated**
  - **(d) access conditions are defined in Part 12 as being additional to those in the Standard Access Agreement and which are not immaterial. Minor variations to payment terms or amendments to insurance requirements are considered immaterial.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in cl. 6.13 of the Amended 2017 DAU at Appendix H.**

The QCA's decision is that it is not appropriate to approve the 2017 DAU in respect of the access conditions provisions in Part 6. The QCA notes that stakeholders submitted that Aurizon Network's 2017 DAU access conditions required amendment.[996]

Aurizon Network's collaborative submission proposal

Following the collaborative submission process, Aurizon Network[997] and the QRC[998] submitted that the 2017 DAU should be amended to include revisions to cl. 6.13 and the definition of 'access conditions' (Part 12). Pacific National[999] supported Aurizon Network's collaborative submission proposals for this drafting.

The following discussion reflects the issues raised in submissions, although stakeholders were able to support consensus drafting in the collaborative submission process.

Applicability

Aurizon Network proposed that 2017 DAU access conditions provisions should be considered in the context of the 2016 Undertaking. Aurizon Network's 2016 Undertaking expanded the application of access condition provisions to all non-standard terms that have cost and risk implications for Aurizon Network or an access seeker. This meant that Aurizon Network must seek the QCA's approval for these types of non-standard terms.

In the 2017 DAU, Aurizon Network said it had sought to simplify the access conditions provisions (compared with its 2016 Undertaking) because it considered that a much larger number of access conditions would be caught under the broadened definition.[1000] It considered

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[996] Anglo American, sub. 18: 17–18; BMA, sub. 24: 7; Pacific National, sub. 19: 6–7; QCoal, sub. 16: 3:4; QRC, sub. 20: 18–21.
[997] Aurizon Network, sub. 26: 3, 7 and Appendix 1.
[998] QRC, sub. 29: 2, and Annexures 1, 2.
[999] Pacific National, sub. 28: 1.
[1000] Aurizon Network, sub. 1: 56.

the 2016 Undertaking approach may require QCA approval for every variation to a standard access agreement. Aurizon Network said the 'broader application of the access conditions approval regime in UT4, applying to even quite minor variations to the standard access agreements, increases the risk of significant delays and uncertainty in the access negotiation process'[1001], and noted the length of time taken for the QCA's approval process for the access conditions in respect of the Wiggins Island Rail Project (WIRP).

Aurizon Network also considered that its 2016 Undertaking approach:

- does not take into account the other protections that exist within the 2016 Undertaking (and within the proposed 2017 DAU) for access seekers who do not wish to agree to a term proposed by Aurizon Network that deviates from the Standard Access Agreement, such as how the standard access agreements act as a safe harbour and (in the context of expansions) the availability of user funding as an alternative to agreeing access conditions with Aurizon Network[1002]
- is inconsistent with its legislative framework and the intended policy objective of the Queensland Government in respect of the right of parties to negotiate.[1003] In particular, Aurizon Network considered that 'any provision of an access undertaking that prevents an access provider and an access seeker from freely negotiating terms (even if those terms are inconsistent with an access undertaking) divests the access provider and access seeker of their fundamental right to negotiate'.[1004]

Aurizon Network considered its approach under the 2017 DAU (that is, approval of access conditions will be sought once they have been agreed but before they become binding) is more practical and effective than the 2016 Undertaking requirement to submit a report when parties intended to commence negotiating access conditions (as the commercial bargain will not have been struck at this stage). It considered that 'its volunteered proposal is appropriate and removes any concern that the QCA or interested stakeholders may have in relation to access conditions potentially disadvantaging other parties'.[1005]

Anglo American, BMA, Pacific National, QCoal and Rio Tinto did not support changes that limit the QCA's oversight. Specifically:

- Anglo American said Aurizon Network should not be allowed to determine that an access application requires access conditions if it is simply due to the provision of an access agreement and not because the items are material to risk.[1006]
- Pacific National said that if the intention of the amendments is to:
  - allow minor amendments to coal access agreements which are unique to an access seeker, and/or
  - allow non-coal access agreements to be negotiated,

  then the 2017 DAU drafting should be amended to reflect these specific items as being explicitly identified exemptions to the otherwise reinstated cl. 6.13 of the 2016 Undertaking. Pacific National said this approach would be acceptable, as long as access conditions

[1001] Aurizon Network, sub. 1: 56.
[1002] Aurizon Network, sub. 1: 56–57.
[1003] Aurizon Network, sub. 1: 57–58.
[1004] Aurizon Network, sub. 1: 57.
[1005] Aurizon Network, sub. 1: 58–59.
[1006] Anglo American, sub. 18: 18.

negotiated under these exemptions do not unfairly differentiate between access holders and/or access seekers.[1007]

- BMA said that if current provisions unintentionally expand the application of access conditions, then changes need to be made so the provisions operate as practically intended.[1008]

Anglo American, BMA and QCoal supported the QRC's submission.

The QRC initially submitted that it did not support the definition of access conditions or cl. 6.13 as proposed in Aurizon Network's 2017 DAU. The QRC submitted:

- The modification put forward by Aurizon Network has the effect of narrowing and complicating the definition. A narrow definition creates ambiguity and increases the scope for parties to seek to avoid the access conditions regime.[1009]
- The two circumstances in which Aurizon Network proposed that the QCA can withhold its approval of an access condition are remote. In practice it is highly unlikely that an access seeker who is not a party to an access condition will be 'directly' and 'materially disadvantaged' by an access condition. Secondly, it is unlikely that access conditions would breach the QCA Act.[1010]
- Access conditions should not be confined to expansions. In non-expansion scenarios, the dispute process provides an element of protection, but:
  - the protection only arises where a dispute arises
  - there is no downside in there being a need to obtain QCA approval for access conditions for non-expansionary capacity.[1011]
- Where an expansion is concerned, the protection provided by the access conditions regime is important for the following reasons:
  - Without the obligation to invest and in the absence of a competitive alternative to Aurizon Network funding, its monopoly power is unchecked.
  - While the QCA may be able to resolve disputes over some aspects of the negotiation process, it cannot compel Aurizon Network to fund an expansion, which means the undertaking dispute process alone is not enough.[1012]

Aurizon Network's collaborative submission proposal

In March 2017, Aurizon Network and the QRC submitted that they had reached consensus on amendments required to be made to the 2017 DAU access conditions provisions. This drafting broadly reflects the QRC's proposed mark-up of the definition of access conditions and cl. 6.13 that the QRC included in its February submission[1013], except to:

- clarify that cl. 6.13 applies only to coal-carrying train services

[1007] Pacific National, sub. 19: 7.
[1008] BMA, sub. 24: 7.
[1009] QRC, sub. 20: 18–19.
[1010] QRC, sub. 20: 19–20.
[1011] QRC, sub. 20: 19.
[1012] QRC, sub. 20: 19.
[1013] QRC, sub. 29, Annexure 2.

- reinstate the definition of an access charge to ensure there are no unintended consequences in the context of the remainder of the UT5 undertaking.

The consensus drafting acknowledges that access conditions may include other monetary considerations (not only access charges), whether levied under an access agreement or otherwise.

Aurizon Network said the two minor amendments above will ensure that immaterial variations to standard access agreements do not require QCA pre-approval. Aurizon Network said pre-approval will remain a requirement for other, more material variations.[1014]

Pacific National accepted the QRC's and Aurizon Network's proposed changes[1015], but would require different arrangements should a related party be the other party.[1016]

The collaborative submissions agreed to include the definition of an access charge as access charges being related only to access agreements and not any other arrangement.[1017] The definition of an access charge is proposed to remain unchanged from the 2016 Undertaking.

Given the confidential nature of access agreements, it is important that a mechanism is in place to ensure that any non-standard terms agreed do not adversely impact access holders and access seekers not party to the negotiation.

Insofar as our decision relates to access conditions generally, the fact that stakeholders participating in the collaborative discussions have reached a consensus position is relevant to our decision on the 2017 DAU access conditions provisions (s. 138(2)(h)).

The consensus drafting submitted in Aurizon Network and the QRC's collaborative submission is considered appropriate, as it provides the QCA with regulatory oversight to ensure that Aurizon Network does not impose access conditions which are not reasonably required to mitigate identified risk, are not in the public interest and which would be disadvantageous to relevant stakeholders not parties to the agreements containing the access conditions. The consensus drafting also explicitly identifies conditions that are immaterial and are therefore not access conditions, to improve clarity.[1018] The consensus drafting achieves a more workable and simple process while also including some of the key elements of the 2016 Undertaking, such as a required access conditions report.

For the reasons outlined above, the drafting submitted under collaborative submissions balances the legitimate business interests of Aurizon Network (s. 138(2)(b)) and the interests of access seekers(s. 138(2)(d)). It also promotes efficiencies in the regulatory process that is in the public interest (s. 138(2)(d)) and advances the object of Part 5 (s. 138(2)(a)).

[1014] Aurizon Network, sub. 26: 7.
[1015] Pacific National, sub. 28: 1.
[1016] Pacific National, sub. 61: 21–22.
[1017] QRC, sub. 29: 2.
[1018] QRC, sub. 29, Annexure 1, clause 6.13 marked up.

16 AVAILABLE CAPACITY ALLOCATION AND MANAGEMENT

16.1 Aurizon Network's 2017 DAU proposal

Part 7 of the 2017 DAU outlines the general principles and procedures for the allocation of existing capacity[1019] to access seekers and the management of capacity once it has been contracted to access holders. Among other things, it also sets out a framework for transfers of access rights between access holders.

Part 7 of the 2017 DAU framework consists of principles and procedures for Aurizon Network to:

- allocate available capacity to access seekers and maintain registers of capacity notifications and committed capacity (cl. 7.2), including where there are mutually exclusive access applications (cl. 7.5)
- resume capacity from an access holder (cl. 7.6).

It also outlines processes for access holders to:

- renew contracted capacity (cl. 7.3)
- transfer capacity, including the:
  - transfer of access rights from an access holder to an access seeker (cl. 7.4.2)
  - relinquishment of access rights to Aurizon Network (cl. 7.4.3).

Key issues identified during the QCA's investigation

The QCA has considered all elements of Part 7 of Aurizon Network's 2017 DAU proposal in making its decision. The following issues attracted comment from stakeholders, or were identified for further consideration:

- the process for allocating available capacity (section 16.2)
- renewal term for access agreements (section 16.3)
- capacity resumption (section 16.4)
- relinquishment processes to support productivity improvements (section 16.5)
- consensus drafting of transfer provisions arising from the collaborative submission process (section 16.6)
- the period for short-term capacity transfers arising from the collaborative submission process (section 16.7).

[1019] Existing capacity refers to capacity that does not require an expansion to meet an access seeker's requirements.

16.2 Allocating available capacity

Aurizon Network's 2017 DAU proposal

Aurizon Network proposed to prioritise the allocation of available capacity[1020] to the access seeker who submits an access application first (cl. 7.5.2(b)). Where there is insufficient available capacity to satisfy more than one access application, Aurizon Network proposed to establish and maintain a queue to determine the order in which it will negotiate with the competing access seekers (cl. 7.5.2(b)). In managing the order of the queue, Aurizon Network proposed to give priority to renewing access seekers, then access seekers who hold conditional access rights, followed by access seekers based on the date of application.

Aurizon Network proposed to maintain registers that assist with identifying and coordinating the reallocation of capacity to interested parties, which include:

- the capacity notification register to record parties' interests in securing additional capacity (cl. 7.2.2)
- the committed capacity register to record parties' capacity allocations (cl. 7.2.3).

Aurizon Network may refuse to allocate available capacity to an access seeker if it reasonably considers that the access seeker has not suitably demonstrated the ability to use the access rights requested (cl. 7.2.1).

QCA analysis and decision

Summary of decision 16.1

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposal in respect of the framework for allocating available capacity.**

Stakeholders did not object to Aurizon Network's proposal.

The QCA notes that Aurizon Network has proposed provisions to allocate available capacity that are consistent with existing arrangements.

Aurizon Network later submitted minor amendments to cl. 7.5.2 of its 2017 DAU to clarify the way in which conditional access holders with a capacity shortfall are incorporated into the queuing mechanism.[1021]

Aurizon Network's proposed processes for allocating available capacity appropriately balance the legitimate business interests of Aurizon Network with the interests of access seekers and end customers.

The QCA notes also that no issues were pursued by stakeholders. Having regard to s. 138(2) of the QCA Act, including the matters noted above, the arrangements proposed by Aurizon Network are considered to be appropriate, and balance the legitimate business interests of Aurizon Network (s. 138(2)(b)) with the interests of access seekers (s. 138(2)(e)).

[1020] Access rights for capacity that is not already committed.
[1021] Aurizon Network, sub. 48: cl. 7.5.2.

16.3 Term for renewing access applications

Aurizon Network's 2017 DAU proposal

An existing access holder[1022] has the priority to negotiate with Aurizon Network to renew its access rights, subject to certain conditions being met (cl. 7.3), even if a queue of competing access applications has been formed (cl. 7.5.2(b)(i)). This is referred to as a renewal access application. In certain instances (cl. 7.3(b)), the renewal of access rights may relate to a different origin and destination than the existing access rights.

A renewal access application is required to apply for a term that is the lesser of 10 years and the:

- remaining life of the relevant mine for coal-carrying train services; or
- same term as the existing access agreement for non-coal carrying train services (cl. 7.3(f)).

QCA analysis and decision

> ### Summary of decision 16.2
> - **The QCA decision is to approve Aurizon Network's 2017 DAU proposal in respect of renewing access applications.**

Anglo American considered that access holders who have previously held their access under an agreement for at least 10 years should be able to renew for a lesser period, but not less than five years.[1023] In support of this proposal, Anglo American considered that this would enable better alignment of term expiry dates between track and port agreements, allowing users to better align their significant take-or-pay commitments and capacity requirements.[1024]

Priority for renewal access applications gives access holders certainty and security for the access rights associated with their related investments. Priority for renewal access applications is in the interest of access seekers/holders, as it provides investors with the confidence that access to transportation services will be available on reasonable terms and conditions upon expiry of an access agreement.

However, the certainty provided to access seekers/holders and mines needs to be balanced with the legitimate business interests of Aurizon Network to obtain appropriate security by means of the term of access agreements that underpin its rail infrastructure investment.

In any case, it is not a requirement for access holders to renew on the terms specified in cl. 7.3(f). The renewal provisions only apply if the renewing access holder wants to maintain priority in a queue of access applications for those access rights.

On balance, the proposed term requirements for renewal access applications appropriately balance the legitimate business interests of Aurizon Network with the interests of access seekers/holders and end customers.

Therefore, having regard to s. 138(2) of the QCA Act, the QCA considers the terms for renewal access applications in the 2017 DAU to be appropriate.

[1022] Referred to as a renewing access seeker.
[1023] Anglo American, sub. 18: 18.
[1024] Anglo American, sub. 18: 18.

16.4 Capacity resumption

Aurizon Network's 2017 DAU proposal

The 2017 DAU enables Aurizon Network to initiate a process to resume access rights where an access holder underutilises its train service entitlement in accordance with a resumption trigger event (cl. 7.6(a)).

Following a resumption trigger event, Aurizon Network may issue an information request notice to the relevant access holder asking the access holder to demonstrate a sustained requirement for the underutilised access rights. This provides the access holder with an opportunity to demonstrate its ability to use the access rights.

After issuing an information request notice, Aurizon Network may resume access rights where:

- the access holder fails to demonstrate a sustained requirement for the underutilised access rights
- Aurizon Network is able to demonstrate a reasonable expectation of a sustained alternative demand for those access rights (cl. 7.6(d)).

Where Aurizon Network resumes capacity, a resumption notice is to be issued to the access holder confirming the date the access rights will be resumed (cl. 7.6(e)).

QCA analysis and decision

Summary of decision 16.3

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposal in respect of capacity resumption provisions.**

Stakeholders did not raise any concerns with Aurizon Network's proposal. In this respect, the QRC submitted proposed drafting which the QCA considered to be consistent with Aurizon Network's framework for capacity resumptions.[1025]

After having regard to each of the matters set out in s. 138(2) of the QCA Act, the QCA considers that Aurizon Network's proposal appropriately balances the legitimate business interests of Aurizon Network with the interests of access seekers/holders and end customers.

The QCA's decision is to approve the framework for Aurizon Network to resume contracted capacity as proposed by Aurizon Network. The QCA notes that Aurizon Network has proposed capacity resumption provisions consistent with existing arrangements. Having regard to s. 138(2) of the QCA Act, including matters noted above, the arrangements proposed by Aurizon Network are considered to be appropriate.

16.5 Relinquishment processes

Aurizon Network's 2017 DAU proposal

Access holders are able to relinquish their access rights to Aurizon Network, in accordance with the terms of their access agreements. The proposed conditions that must be satisfied for Aurizon Network to give effect to a relinquishment are outlined in cl. 7.4.3 of the 2017 DAU. An access holder (or customer) who initiates a relinquishment of access rights will incur a fee.

[1025] QRC, sub. 20, Annexure 2.

The proposed relinquishment provisions (cls. 7.4.3(f)–(k)) are also included in the Standard Access Agreement and Standard Train Operations Deed.

Aurizon Network's 2017 DAU proposed three circumstances in which an access holder's monthly train service entitlement may be reduced during the term of an access agreement when trains are operated above the maximum payload for its contracted train service type.

- 'Access holder-initiated reduction'—the access holder may request an increase in the maximum payload for a train service type, with a consequent reduction in the nominated monthly train services (cl. 11 of the Standard Access Agreement and cl. 11.2 of the Standard Train Operations Deed).[1026]
- 'Reduction due to exceeding maximum payload'—Aurizon Network may reduce the train services if, at a point in time, the average annual payload for a train service type has exceeded the maximum payload for that train service type as specified in the agreement (cl. 10 of the Standard Access Agreement and cl. 11.1 of the Standard Train Operations Deed).[1027]
- 'Reduction to create additional capacity'—Aurizon Network may commence a mandatory process requiring an increase in the nominal payload, with a consequent reduction in the nominated monthly train services (cl. 12 of the Standard Access Agreement and cl. 12 of the Standard Train Operations Deed).[1028]

Where Aurizon Network reduces a train operator's nominated monthly train service entitlement as contemplated by cls. 7.4.3(f) and (i) of the 2017 DAU, the access holder is not required to pay a relinquishment fee.

[1026] Refer to cl. 7.4.3(h) of Aurizon Network's 2017 DAU.
[1027] Refer to cls. 7.4.3(f) and (g) of Aurizon Network's 2017 DAU.
[1028] Refer to cl. 7.4.3(i) of Aurizon Network's 2017 DAU.

QCA analysis and decision

Summary of decision 16.4

- **The QCA's decision is that the capacity relinquishment processes due to increased maximum payloads in Aurizon Network's 2017 DAU be amended to reflect the consensus drafting agreed between Aurizon Network and QRC, as submitted in their respective collaborative submissions, so that:**
  - **(a) the 'Access holder-initiated reduction' provisions and 'reduction due to exceeding maximum payload' provisions as submitted by Aurizon Network in its collaborative submission are included. Also, a clarifying note be included noting that train tests approved by Aurizon Network are exempt from the Reduction Notice trigger process**
  - **(b) for any surplus access rights that are relinquished under the provisions referred to above, a 'SAR Relinquishment Fee' is payable based on the difference between the AT_2 charges that would have been paid but for the relinquishment on the terms as agreed by participating stakeholders and Aurizon Network**
  - **(c) the mandatory 'Reduction to create additional capacity' provisions are deleted.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in the Amended 2017 DAU at Appendix H**.

Matters relating to these processes are discussed in detail in Chapter 14. The following discussion should be read in conjunction with the QCA's analysis and decision relating to Part 5 and the Standard Agreements.

Aurizon Network considered that its 2017 DAU proposed relinquishment provisions in its Standard Access Agreement and Standard Train Operations Deed allowed for productivity improvements to enable more efficient capacity management practices.[1029] Aurizon Network submitted that under its 2016 Undertaking, Aurizon Network and access holders are constrained in their ability to manage, and cost-effectively create, capacity for the benefit of the supply chain.[1030]

Initially, stakeholders did not support Aurizon Network's 2017 DAU relinquishment proposals relating to exceeded maximum payloads.[1031]

However, following the collaborative submission process, Aurizon Network submitted that the 2017 DAU be amended with revised drafting in respect of payload relinquishment provisions. Stakeholders[1032] supported the proposed drafting in Aurizon Network's collaborative submission.[1033] The amendments to the 2017 DAU sought, following the collaborative process, are outlined and considered in Chapter 14.

1029 Aurizon Network, sub. 1: 4.
1030 Aurizon Network, sub. 1: 51.
1031 QRC, sub. 20: 34–36, Annexure 2; BMA, sub. 24: 6; Pacific National, sub. 19: 8; QCoal, sub. 16:2–3; Anglo American, sub. 18: 19.
1032 Pacific National, sub. 28: 1–2; Aurizon Operations, sub. 27: 2; QRC, sub. 29: 3; Aurizon Network, sub. 26: 6; Aurizon Network, sub. 40: 282–283.
1033 Aurizon Network, sub. 26: 6, Appendix 1. As set out in cl. 7.4.8 of the amended 2017 DAU submitted in the collaborative process (and reflected in the amendments to cls. 10–13 of the Standard Access Agreement).

Also, during the collaborative process Aurizon Network reached consensus with other stakeholders[1034] on a surplus access rights (SAR) relinquishment fee to apply where:

- an access holder increases its maximum contracted payload and relinquishes existing contracted train paths;[1035] or
- Aurizon Network reduces an access holder's train service entitlement when average payloads exceed the maximum payload and the access holder fails to respond to a notice from Aurizon Network.[1036]

The QCA's decision is that it is not appropriate to approve Aurizon Network's 2017 DAU in respect of the relinquishment processes relating to increased maximum payloads. Aurizon Network's 2017 DAU must be amended to incorporate the consensus drafting supported by Aurizon Network and participating stakeholders.

The QCA's reasoning for this decision is contained in Chapter 14.

16.6 Transfers of access rights

Aurizon Network's 2017 DAU proposal

Access holders are able to transfer their access rights to another access holder/access seeker in accordance with the terms of their access agreements. The criteria that must be satisfied for a proposed transfer to take effect are outlined in cl. 7.4.2 of Aurizon Network's 2017 DAU.

An access holder that initiates a transfer or a relinquishment of access rights may incur a fee. Aurizon Network proposed to calculate the transfer fee and notify the relevant access holder of the fee payable as well as the key assumptions used to calculate the fee.

Aurizon Network's 2017 DAU proposed that, other than for short-term transfers, the transfer fee be calculated based on the present value of the take-or-pay charges that would have been payable for the transfer period (cl. 7.4.2(s)).

Aurizon Network's 2017 DAU proposed similar arrangements to apply to transfers initiated by customers (cl. 7.4.2(e)).

QCA analysis and decision

Summary of decision 16.5

- **The QCA's decision is that the transfers of access rights provisions in Aurizon Network's 2017 DAU be amended to reflect the consensus drafting agreed between Aurizon Network and the QRC, as submitted in their respective collaborative submissions.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in cl. 7.4 of the Amended 2017 DAU at Appendix H.**

Initial submissions from stakeholders considered that the transfer provisions were complex and could be improved.[1037] The QRC proposed a number of amendments to the transfer provisions.[1038]

[1034] Pacific National, sub. 28: 1–2; Aurizon Operations, sub. 27: 2; QRC, sub. 29: 3.
[1035] Aurizon Network, sub. 26: 6, Appendix 1 (refer to cl. 7.4.8(i)(ii) of the collaborative redrafted 2017 DAU).
[1036] Aurizon Network, sub. 26: 6, Appendix 1 (refer to cl. 7.4.8(j) of the collaborative redrafted 2017 DAU).
[1037] QRC, sub. 20: 21; Anglo American, sub. 18: 18; Pacific National, sub. 19: 19–20; BMA, sub. 24: 6.

Following the collaborative submission process, Aurizon Network submitted that the 2017 DAU be amended, with revised drafting in respect of provisions relating to the transfer of access rights.[1039]

Stakeholders participating in the collaborative process supported Aurizon Network's collaborative submission proposals. The QRC noted that the proposed consensus transfer provisions preserve the substance of the existing transfer provisions, except to amend the short-term transfer period.[1040] Aurizon Network submitted that the intent of the collaborative amendments is to clarify drafting so that transfer provisions are easier to understand and apply.[1041] Pacific National accepted the proposed consensus drafting.[1042]

The QCA's decision is that it is not appropriate to approve the 2017 DAU in respect of the transfer provisions in Part 7. The QCA notes that stakeholders collaboratively proposed that the 2017 DAU transfer provisions be amended.

Included in the relevant factors under s. 138(2) of the QCA Act is 'any other issues the authority considers relevant' (s. 138(2)(h)). Insofar as our decision relates to the transfer provisions generally, the fact that stakeholders participating in the collaborative discussions have reached a consensus position is relevant to the decision on the 2017 DAU transfer provisions. The QCA also considers that proceeding to amend the 2017 DAU for the consensus transfer provisions is in the interests of Aurizon Network, access seekers and access holders, as these provisions will facilitate transfers between access holders and/or customers in an efficient manner.

The QCA considers that the proposed collaborative amendments to the transfer provisions, as submitted by Aurizon Network and the QRC, are appropriate to approve, as they should result in a more efficient use of transfer provisions which in turn promotes the efficient use of capacity (s. 138(2)(a) of the QCA Act).

Accordingly, the QCA's decision is that the provisions of the 2017 DAU which deal with transfers of access rights be amended to incorporate the consensus drafting supported by Aurizon Network, the QRC, Pacific National and Aurizon Operations.

The QCA suggested minor drafting amendments related to the naming of the definition of 'Notice of Intention to Transfer' to correct for an incorrect reference. Aurizon Network and the QRC supported that change.[1043]

16.7 Short-term capacity transfers

Aurizon Network's 2017 DAU proposal

Clauses 7.4.2(h)–(j) establish a short-term capacity transfer mechanism. Short-term transfers have the same application and approval processes as other transfers. However, no transfer fee or relinquishment fee is applicable to a short-term transfer.[1044]

For a transfer to be considered a short-term transfer, transferred train service entitlements must not be held by the transferee for longer than 12 months (cl. 7.4.2(h)).

[1038] QRC, sub. 20: 21.
[1039] Aurizon Network, sub. 26: 6–7; QRC, sub. 29: 2.
[1040] QRC, sub. 29: 2.
[1041] Aurizon Network, sub. 26: 7.
[1042] Pacific National, sub. 28: 1.
[1043] Aurizon Network, sub. 48: 291; QRC, sub. 53: 41.
[1044] Refer to cl. 7.4.2(h)(iii) of Aurizon Network's 2017 DAU.

The transfer fee for a short-term transfer is zero if the transferred train service entitlements have not been transferred by the access holder for more than 24 of the previous 36 months (cl. 7.4.2(t)).

For a short-term transfer, the transferor and transferee's respective access charges must be calculated using the same reference tariffs.

QCA analysis and decision

Summary of decision 16.6

- **The QCA's decision is that the short-term transfer provisions in Aurizon Network's 2017 DAU be amended to reflect the consensus drafting agreed between Aurizon Network and the QRC, as submitted in their respective collaborative submissions.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in cl. 7.4 and related amendments of the Amended 2017 DAU at Appendix H.**

Two-year short-term transfer period

Generally, stakeholders did not support Aurizon Network's proposed one-year short-term transfer period.[1045]

Following the collaborative submission process, Aurizon Network submitted that its 2017 DAU be amended with revised transfer provisions, which amongst other things, proposed the period of a short-term transfer be increased from one to two years.[1046] Aurizon Network submitted this would assist with the adoption and use of its transfer provisions by access holders.[1047]

Stakeholders participating in the collaborative process supported Aurizon Network's collaborative submission proposals. The QRC considered that this allowed for greater flexibility in respect of rail access rights and only marginally departs from the 2016 Undertaking.[1048] Pacific National accepted the two-year period for short-term transfers.[1049]

Insofar as our decision relates to the period for short-term transfers, the fact that stakeholders participating in the collaborative process have reached a consensus position is relevant to the decision on the 2017 DAU short-term transfer provisions. The QCA also considers that proceeding to amend the 2017 DAU for the consensus short-term transfers provisions is in the interests of Aurizon Network, access seekers and access holders, as these provisions will facilitate transfers between access holders and/or customers in an efficient manner.

In addition to providing for the efficient utilisation of the network, short-term transfers provide access holders with the ability to manage variations in the utilisation of their train service entitlements—allowing access holders to meet short-term demand for additional train service entitlements or mitigate take-or-pay liabilities. Providing access holders with greater flexibility within the short-term transfer provisions will further encourage access holders to use this mechanism to manage their access rights.

[1045] QRC, sub. 20: 21; Pacific National, sub. 19: 20; BMA, sub. 24: 7.
[1046] Aurizon Network, sub. 26: 7; QRC, sub. 29: 2.
[1047] Aurizon Network, sub. 26: 7.
[1048] QRC, sub. 29: 2.
[1049] Pacific National, sub. 28: 1.

The revised period for short-term capacity transfers submitted by Aurizon Network and the QRC strengthens the ability of stakeholders to manage variations in the utilisation of their train service entitlements. The provisions in the collaborative consensus drafting will assist to minimise the risks of gaming, by requiring reasonable evidence that the transferred entitlements will be used.

The QCA therefore considers that the revised period for short-term capacity transfers will facilitate short-term transfers between access holders and maximise use of rail infrastructure. This change is in the interests of access holders and access seekers (ss. 138(2)(h),(e) of the QCA Act) and is generally consistent with the object to promote the efficient use of significant infrastructure (s. 138(2)(a) of the QCA Act), while not impacting the legitimate business interests of Aurizon Network (s. 138(2)(b) of the QCA Act). As such, the QCA supports the consensus provisions submitted by Aurizon Network and the QRC.

Accordingly, the QCA's decision is that the 2017 DAU must be amended to incorporate the collaborative drafting supported by Aurizon Network, the QRC and Pacific National.

Criteria for short-term transfers

Anglo American considered that the short-term transfer regime is too restrictive, as a transfer fee may be payable for the transfer if it is for contracted capacity with a different reference tariff.[1050] Anglo American submitted that it is likely to dis-incentivise users from utilising the short-term transfer mechanism.[1051] Anglo American believed that, while other users should not be disadvantaged or impacted by a short-term transfer, there should be scope to broaden the application of the short-term transfer mechanism to ensure that as much capacity as possible can be transferred.[1052]

The QCA recognises that a short-term transfer mechanism that is least restrictive is in the interests of access holders. However, the QCA does not consider it unreasonable that access charges for short-term transfers be calculated using the same reference tariffs as the nominated access rights. The consensus drafting proposed by Aurizon Network and the QRC, and reflected in the collaborative submissions, assists to minimise the complexity of the short-term transfer mechanism. Furthermore, the QCA has considered whether allowing different reference tariffs to be transferred on a zero fee mechanism may increase the risk of gaming behaviour.

The QCA considers that the drafting of provisions relating to short-term transfers and transfer fees payable as incorporated in the consensus drafting provides an appropriate balance between the interests of access seekers and the legitimate interests of the Aurizon Network (ss. 138(2)(b),(e) of the QCA Act). Additionally, the drafting of the transfer fee, and related provisions, will assist to promote efficient use of significant infrastructure (s. 138(2)(a) of the QCA Act). The QCA has also considered the position of stakeholders involved in the collaborative process as reflected in the consensus drafting. Having regard to the matters to be considered by the QCA under s. 138(2) of the QCA Act, including the above matters, the QCA considers that it is appropriate to amend the transfer provisions as reflected in the collaborative submission submitted by Aurizon Network.

Train ordering timeframes

The 2017 DAU required the transferor to submit transfers within a certain timeframe prior to the next train ordering week (cl. 7.4.2(b)(i)(C)). Pacific National submitted that this timeframe

[1050] Anglo American, sub. 18: 18.
[1051] Anglo American, sub. 18: 18.
[1052] Anglo American, sub. 18: 18.

restricts an access holders' ability to flexibly transfer access rights and may reduce the number of short-term transfers that would otherwise occur.[1053]

In its collaborative submission, Pacific National accepted a number of matters addressed in the collaborative drafting, but did not specifically address this issue.[1054] For completeness, the QCA has separately considered this issue.

While it is in the interest of access holders to reduce timeframe requirements for short-term transfers, such a change needs to be balanced with providing Aurizon Network reasonable notice of access holder intentions to enable it to manage the utilisation of the network. The QCA considers that the transfer notice timeframes outlined in the collaborative drafting are appropriate, as they balance the interests of Aurizon Network and access holders (ss. 138(2)(b), (e) of the QCA Act). The QCA considers those timeframes to be consistent with the object of Part 5 (s. 138(2)(a) of the QCA Act) and considers that it is also relevant that stakeholders participating in the collaborative process accepted the timeframes.

Having regard to s. 138(2) of the QCA Act, including the above matters, the QCA considers that it is appropriate to amend the transfer provisions as reflected in the collaborative submission submitted by Aurizon Network.

[1053] Pacific National, sub. 19: 22.
[1054] Pacific National, sub. 28.

17 CAPACITY AND SUPPLY CHAIN MANAGEMENT

17.1 Aurizon Network's 2017 DAU proposal

Part 7A of the 2017 DAU provides a framework for the following matters relating to Network Management Principles (NMPs), supply chain coordination and capacity assessments:

- Aurizon Network's proposed development, review and application of System Rules (cl. 7A.2)
- Aurizon Network's proposed role with regards to coal supply chain coordination and related participation (cl. 7A.3)
- Aurizon Network's annual process to provide updated capacity assessments through the undertaking period (cls. 7A.4.2–7A.4.3)
- Expert review of capacity assessments, including audit processes of Aurizon Network's capacity modelling processes (cl. 7A.4.4)
- Processes where capacity deficits are identified, including publication of reports and consideration of the implications of executing an Access Agreement that would increase the size of the identified capacity deficit (cl. 7A.4.3)
- Provision of System Operating Parameters (SOPs), their use and the processes for amending (cl. 7A.5)
- Network Development Planning requirements (cl. 7A.6).

Schedule G of the 2017 DAU sets out the NMPs including obligations in relation to scheduling, network control and associated services.

For access holders, it is critical that Aurizon Network can meet its contractual obligations, and that train paths are used efficiently. These factors not only affect access holders' volumes and operational flexibility, but they also contribute to a transparent understanding of the need for infrastructure expansion.

Key issues identified during the QCA's investigation

The QCA has considered all elements of Part 7A and Schedule G of Aurizon Network's 2017 DAU in making this decision. The following issues attracted comment from stakeholders or have been identified for further consideration by the QCA:

- Supply chain coordination—Aurizon Network considered that its 2016 Undertaking obligations for it to participate in and adopt operational changes determined by a supply chain group are not workable. Instead, Aurizon Network proposed to participate in supply chain groups where reasonable, and provide reasons where it determines that it would not adopt operational changes proposed by a supply chain group. Collaborative submissions[1055] supported Aurizon Network's cl. 7A.3 proposals. However, in light of Aurizon Network's announced changes to maintenance practices following the draft decision,[1056] stakeholders have since expressed concern about the availability of information to supply chain

[1055] QRC, sub. 29: 2 and Annexure 5; Pacific National, sub. 28: 2.
[1056] Aurizon Holdings 2018b: 3.

participants, supply chain coordination obligations and the impact of Aurizon Network's approach on train path availability and supply chain efficiency.[1057]

- System capacity assessment—Aurizon Network submitted that its 2017 DAU proposal be amended to include a new annual assessment of system capacity, to be used for information purposes of access seekers/holders, train operators and customers.[1058] This new proposal was developed as part of the collaborative submission process and was supported by QRC[1059] and Pacific National.[1060]
- Expert review of capacity assessment—Aurizon Network submitted that its 2016 Undertaking capacity expert review provisions are imprecise and the scope of the expert's work is essentially undefined. Aurizon Network considered that a more accurate capacity assessment is likely to be achieved by an appropriately qualified third party auditing of Aurizon Network's model rather than an expert putting in place an entirely new model.

17.2 Coal supply chain coordination

The efficient delivery of the CQCN's capacity is fundamental to the object of the QCA Act's third party access regime (set out in s. 69E of the QCA Act). This objective is furthered when all access holders and seekers are confident about:

- the development, operation and coordination of the CQCN's supply chains
- planned expansions being the most efficient among the various expansion options considered.

Aurizon Network's active participation in coordination matters, as a key service provider in the supply chain, is therefore critical for the efficient operation of the supply chain.

Aurizon Network's 2017 DAU proposal

Participation in supply chain groups

Aurizon Network submitted that it did not agree with the strict obligation in its 2016 Undertaking[1061] compelling it to participate in each supply chain group, the concerns being:[1062]

- The clause requiring participation does not relate to the terms upon which access is provided to the declared service, and is therefore beyond the scope of an access undertaking to impose such an obligation.
- The clauses requiring Aurizon Network's participation were inflexible and do not allow Aurizon Network to not participate in a supply chain group that is not representative of the relevant supply chain, or to limit its participation.
- Aurizon Network is already required to consult with supply chain groups in developing the SOPs, NMPs and System Rules.

[1057] Anglo American Coal Australia, sub. 57: 8; QRC, sub. 53: 41; Pacific National, sub. 66: 8; QRC, sub. 65: 12–13.
[1058] Aurizon Network, sub. 26: 7 and Appendix 2.
[1059] QRC, sub. 29: 2–3 and Annexure 5.
[1060] Pacific National, sub. 28: 2.
[1061] Aurizon Network's 2016 Undertaking was submitted voluntarily under s. 136 of the QCA Act and included these provisions.
[1062] Aurizon Network, sub. 1: 70–71.

Aurizon Network proposed that it would continue to participate in supply chain groups where it is reasonable to do so and where the incremental costs of participation are recoverable under the undertaking.[1063] Aurizon Network did not consider that it should be required to ensure that supply chain groups were provided with a consistent level of service.[1064]

Aurizon Network also proposed a definition of 'Supply Chain Group' to capture only groups that were established as a supply chain coordination group and which have the support of sufficient participants.[1065]

Obligation to implement operational changes

Aurizon Network did not consider that it should be obliged to make operational changes determined by a supply chain group. Aurizon Network's views were that:[1066]

- Imposing an obligation to make operational changes required by supply chain groups would give power to third party groups to instruct Aurizon Network on how to operate its business.
- Any operational changes that increase capacity would effectively bypass provisions in Part 8 that are subject to prudency tests. Aurizon Network therefore did not propose it should have obligations to implement operational changes that could increase capacity.
- Operational changes proposed by a supply chain group that do not include all stakeholders may not be in the interests of the broader group. However, the broader customer base may be required to fund any operational cost increases through socialised access charges.
- Where there are multiple supply chain groups, a proposal by one group may directly impact another's performance. In such cases, Aurizon Network said it should not be forced to make changes in favour of one supply chain group, over another.

Accordingly, Aurizon Network did not propose provisions requiring it to implement operational changes proposed by a supply chain group. Aurizon Network instead said it would investigate suggested operational changes if it has the capability to do so and if it considers the request was reasonable. Where Aurizon Network decides not to implement such changes, it would provide reasons for its decision to the supply chain group.

Aurizon Network did not propose any drafting that clarified that disputes arising from a decision not to adopt operational changes would be dealt with in accordance with Part 11.

[1063] Aurizon Network, sub. 1: 71.
[1064] Aurizon Network, sub. 1: 2017 DAU mark-up: 150.
[1065] Aurizon Network, sub. 1: 72. See Part 12 of the 2017 DAU.
[1066] Aurizon Network, sub. 1: 73.

QCA analysis and decision

Summary of decision 17.1

- **The QCA considers it appropriate to approve Aurizon Network's 2017 DAU proposals in respect of participation in supply chain groups, subject to amending cl. 7A.3(a) to include a new provision requiring Aurizon Network to participate in the development and implementation of productivity improvement initiatives to improve the efficiency and performance of supply chains, where reasonable to do so.**
- **The QCA required amendments to Aurizon Network's 2017 DAU are provided in cl. 7A.3 of the Amended 2017 DAU at Appendix H.**

Participation in supply chain groups

The 2017 DAU provides discretion for Aurizon Network to participate in supply chain groups where it considers it reasonable to do so. QCoal Group agreed with Aurizon Network's view, noting that Aurizon Network has been willing to be an active member of supply chain groups and that it is in Aurizon Network's interest to participate.[1067]

In response to the QCA's request for comment on whether supply chain coordination obligations in the 2017 DAU ensure sufficient information is provided to enable co-ordination with rail and port operators,[1068] Aurizon Network submitted that existing obligations in the Network Management Principles (NMPs) and its communications protocols provide stakeholders with substantive information in relation to its maintenance activities. However, it noted it would welcome suggestions on ways in which it can improve the provision of information to stakeholders as part of its overall engagement with the supply chain.[1069]

QRC and Pacific National initially supported Aurizon Network's proposal in collaborative submissions. However, QRC subsequently supported strengthening and clarifying supply chain coordination obligations, including reverting to an absolute requirement on Aurizon Network to participate in supply chain groups, ensuring coordination of maintenance activities across the supply chain and requiring Aurizon Network's participation in supply chain productivity initiatives.[1070] Pacific National was concerned about the potential for changes to operating and maintenance practices to have a non-equivalent impact on competing above-rail operators.[1071] It believed there should be greater transparency and accountability on Aurizon Network with regard to the impact of maintenance activities on the supply chain, with a focus on promoting alignment.[1072]

Anglo American was concerned about Aurizon Network's incentives to make operational improvements, including in conjunction with supply chain groups. It supported establishing 'rail capacity groups' for each system and enhanced reporting obligations.[1073] Aurizon Coal noted that it already receives considerable information on Aurizon Network's maintenance plans to assist in its scheduling and planning, however, it is not presented in a way that allows operators to readily discern the impact of maintenance plans on path availability and on specific hauls. It suggested that improvements could be made in timeliness and presentation. It also noted that

[1067] QCoal Group, sub. 16: 5.
[1068] QCA 2018b.
[1069] Aurizon Network, sub. 64: 27–28.
[1070] QRC, sub. 53: 39; sub. 65: 13, 17.
[1071] Pacific National, sub. 61: 9.
[1072] Pacific National, sub. 66: 8.
[1073] Anglo American, sub. 57: 8.

important supply chain productivity improvements, such as the operation of longer trains, have ceased under the new regime and it supported incentives for Aurizon Network to consider above-rail productivity improvements as a significant enabler of competition in the above-rail market.[1074]

The QCA acknowledges stakeholders heightened concerns about supply chain coordination in light of Aurizon Network’s announced changes to maintenance practices.[1075] This has led to calls for stronger obligations on Aurizon Network, particularly around its scheduling priorities and supply chain coordination. The QCA considers that Aurizon Network’s 2017 DAU should be amended to implement an appropriate accountability mechanism for Aurizon Network in scheduling, as well as to include an appropriate degree of transparency about the impact of Aurizon Network’s maintenance planning and practices on access holders and supply chain participants. These measures are addressed in sections 17.11 and 20.2 of this decision.

In terms of the proposed obligation in Aurizon Network's 2017 DAU to participate in supply chain groups and discussions to coordinate maintenance where reasonable, while there is an element of subjectivity implied by the reasonableness test, a reasonableness threshold is also capable of being tested objectively. Also, in general, supply chain groups should have the support of sufficient participants in the supply chain to effectively perform a co-ordination function (see the definition of Supply Chain Group in Part 12 of Aurizon Network's 2017 DAU). The QCA considers that the collaborative drafting of the 2017 DAU retains an appropriate degree of obligation on Aurizon Network to participate in supply chain groups and to address coordination of maintenance activities, while retaining necessary flexibility for scheduling in a dynamic operating environment. The QCA’s proposed accountability measures around scheduling and reporting should also mitigate stakeholder concerns in this regard (sections 17.11 and 20.2).

However, the QCA requires the inclusion of a new provision in cl. 7A3(a) which strengthens and clarifies Aurizon Network’s obligation to participate in the development and implementation of productivity improvement initiatives for the supply chain. The QCA considers it is reasonable and in the interests of all supply chain participants, including Aurizon Network, access holders and access seekers, to consider productivity improvement initiatives that may promote efficient use of and investment in rail infrastructure. This is consistent with promoting the object of Part 5 (s. 69E). Aurizon Network’s interests are protected as this obligation is subject to participation being reasonable and, further, it is not required to implement changes arising from its participation.

The QCA acknowledges Aurizon Network’s existing obligations and practices in communicating its scheduling decisions with access holders and customers, including information about network possessions. This is supported by its obligation to participate in discussions with other service providers and supply chain participants with a view to coordination of maintenance activities, where reasonable to do so. While the QCA is aware that some stakeholders are concerned about the effectiveness of Aurizon Network's communication,[1076] the QCA nevertheless considers that the obligations on Aurizon Network (contained within the Amended 2017 DAU) (as noted above) and the enhanced accountability and transparency measures proposed in this decision, provide an appropriate balance in terms of supply chain coordination obligations and communication with stakeholders. Given this, the QCA will at this stage closely

[1074] Aurizon Coal, sub. 55: 1–2; sub. 67: 4.
[1075] QRC, sub. 65; 12–13; Pacific National, sub. 66: 8; Aurizon Coal, sub. 67: 2; Anglo American, sub. 57: 8.
[1076] QCA 2018e, 4–5.

monitor this issue and the effectiveness of the overall range of measures around scheduling and supply chain coordination. The QCA welcomes Aurizon Network's willingness to consider ways to improve the value of the information it provides about its maintenance activities as part of its engagement with the supply chain, and encourages it to consider proposals by stakeholders in this regard.

Overall, we consider that the Aurizon Network proposal (amended as proposed above) does not substantially weaken its obligation and provides reasonable qualifications for participation; that is, Aurizon Network must participate if it has the capacity to do so and if it considers the request is reasonable.

The QCA is concerned that Aurizon Network should not be discriminatory in selecting the supply chain groups in which it chooses to participate. The QCA notes Aurizon Network has proposed behavioural obligations that, amongst other things, include the UT5 undertaking being applied consistently.[1077] The QCA is not aware of evidence that preferential treatment is being provided to certain supply chain groups over any other, and will monitor this issue.

The QCA's decision is to amend Aurizon Network's 2017 DAU cl. 7A.3(a) as noted above and to approve the 2017 DAU cls. 7A.3 (b), (c) and (e). These changes provide an appropriate balance in supply chain coordination obligations as they provide obligations on Aurizon Network to participate while also giving due consideration to the need for costs associated with participation to be reasonable.(s. 138(2)(b)). In the QCA's view, the provisions also further the object of Part 5 of the Act (s. 138(2)(a)), by providing for participation in supply chain groups and coordination of supply chains more broadly. At the same time, the proposed provisions are in the interests of access seekers and access holders (ss. 138(2)(e) and (h)).

Additionally, the proposed definition of supply chain groups is considered reasonable. This provides a recognition process for supply chain groups to be sufficiently representative of their customer base and provides an incentive for supply chain groups to be formed on a representative and non-exclusive basis. This strikes an appropriate balance between the interests of Aurizon Network (s. 138(2)(b)) and access seekers and access holders (ss. 138(2)(e) and (h)).

Obligation to implement operational changes

QCoal Group supported Aurizon Network's position regarding implementing operational changes, noting that Aurizon Network is in a unique position to assess the impact of any operational changes proposed by a supply chain group in the context of the CQCN.[1078]

Submissions from the QRC[1079] and Pacific National[1080] ultimately confirmed support for Aurizon Network's 2017 DAU proposals in relation to implementing operational changes proposed by supply chain groups:

- Pacific National agreed with the 2017 DAU, conditional on other changes in the broader collaborative submission being accepted.[1081] Pacific National initially considered that Aurizon

[1077] Clause 2.3 of Aurizon Network's 2017 DAU.
[1078] QCoal Group, sub. 16: 5.
[1079] QRC, sub. 29: 2 and Annexure 5; QRC, sub. 65: 19.
[1080] Pacific National, sub. 28: 2.
[1081] Pacific National, sub. 28: 2.

Network should adopt operational changes that will improve capacity in the system. It proposed that 2016 Undertaking drafting be reinstated.[1082]

- The QRC said that the agreed drafting as set out in the 2017 DAU is appropriate.[1083] Initially, the QRC did not consider that the risks identified by Aurizon Network to justify a change to cl. 7A.3(d) are likely to occur. It said that the adverse effect test is not confined to the system proposing the change. The QRC also objected to proposed provisions in relation to operational changes that increase capacity, submitting that the 2016 Undertaking drafting for cl. 7A.3(d) be reinstated.[1084] However, in its collaborative submission, the QRC withdrew these comments.[1085]

The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in regard to the obligation to implement operational changes (cl. 7A.3(d)). On the basis of the arguments presented by Aurizon Network, we are satisfied that unanticipated issues could arise from an automatic obligation to implement changes, although it is acknowledged that the risk is likely low. At the same time, Aurizon Network's 2017 DAU does not discourage supply chain groups from considering operational changes that would increase capacity. Rather, Aurizon Network has the discretion whether to implement changes, reflecting its better information about the CQCN in general, and must give reasons for the exercise of its discretion. Such reasons would necessarily relate to any adverse impacts on Network Development Plans, System Rules or SOPs that may not be anticipated by, nor important to, a particular supply chain group. The obligation to give reasons should act to keep Aurizon Network's decision-making reasonable and transparent in this regard. Nonetheless, the QCA will monitor these matters to identify Aurizon Network's compliance.

In response to the specific issues raised by Aurizon Network:

(a) The QCA accepts that some qualifications need to be applied to the obligation to implement changes proposed by a supply chain group, to take account of issues raised by Aurizon Network. Clause 7A.3(d) of the 2017 DAU is therefore considered appropriate.

(b) The costs of operational changes that result in an increase in capacity should be compared to the costs of comparable infrastructure expansion options. The supply chain groups may be able to propose cost-effective changes that defer capacity expansions. Aurizon Network's participation in supply chain groups would facilitate a comparison of the options. However, the 2017 DAU would not seem to inhibit appropriate consideration of such options, as it provides for Aurizon Network to participate where the request is reasonable (and this likely includes examples where there are benefits).

In summary, the QCA considers that it is appropriate to amend cl. 7A.3(a) of Aurizon Network's 2017 DAU as proposed above and to approve cls. 7A.3 (b), (c), (d) and (e) of the 2017 DAU in regard to participation in supply chain groups and implementation of changes proposed by supply chain groups. For the reasons listed above, these provisions strike an appropriate balance between the interests of Aurizon Network, access seekers and access holders (ss. 138(2)(b), (e) and (h)) and encourage the economically efficient operation and investment in infrastructure (s. 138(2)(a)).

[1082] Pacific National, sub. 19: 9.
[1083] QRC, sub. 29: 2.
[1084] QRC, sub. 20: 23.
[1085] QRC, sub. 29: 2.

17.3 Capacity assessment

Aurizon Network's 2017 DAU proposal

Aurizon Network submitted that its 2017 DAU does not require any provisions for a baseline capacity assessment as the one-off requirement will be completed under its 2016 Undertaking.[1086] Accordingly, the 2017 DAU does not include these processes.[1087]

QCA analysis and decision

Summary of decision 17.2

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposal in respect of not including provisions for a baseline capacity review on the basis that this process has been completed under its 2016 Undertaking.**

Subsequent to the draft decision, the QCA finalised its assessment of Aurizon Network's baseline capacity assessment report (BCAR) as part of the 2016 Undertaking.[1088]

While the QCA agreed to the BCAR as a first step towards establishing a collective understanding of capacity, it noted that it is open to argue that the BCAR has not fully achieved its intent and purpose:

> The BCAR is intended to enable stakeholders to gain a comprehensive common understanding of the capacity in each CQCN system; yet, they have generally disagreed with Aurizon Network's modelling approach and conclusions.[1089]

The QCA noted that the future annual capacity assessment updates can be made more useful, if more data were presented and data were presented in a more transparent manner—and that Aurizon Network has committed to developing a system capacity assessment to address the shortcomings of BCAR.

The QRC accepted Aurizon Network's 2017 DAU proposals on the proviso that the baseline capacity assessment is completed and approved under the 2016 Undertaking.[1090] Pacific National observed that Part 7A may need redrafting to reflect the status of the baseline capacity work, but did not propose any changes at this time.[1091] Anglo American submitted that the baseline capacity concept should not be deleted, and that a yearly updated baseline capacity report should be provided to the QCA and industry via an updated Network Development Plan (NDP) document.[1092]

The QCA's decision is to approve Aurizon Network's 2017 DAU proposal to not include provisions for a baseline capacity review, taking account of the views expressed in submissions, and given the baseline capacity assessment has been completed under Aurizon Network's 2016 Undertaking. Consequently, the annual capacity assessment (section 17.4) does not require a transitional provision.

[1086] Aurizon Network, sub. 1: 86.
[1087] Aurizon Network, sub. 1: 2017 DAU mark-up: 151–157.
[1088] QCA 2018a.
[1089] QCA 2018a: 19.
[1090] QRC, sub. 20: 24, Annexure 1: 6.
[1091] Pacific National, sub. 19: 20–21.
[1092] Anglo American, sub. 18: 19.

The QCA considers this is appropriate after having regard to the s. 138(2) factors, because it balances the interests of Aurizon Network while ensuring an appropriate level of information is available to access seekers and access holders in respect of capacity matters (ss. 138(2)(b),(d),(e) and (h)).

17.4 Annual capacity assessments

Aurizon Network's 2017 DAU proposal

Aurizon Network's 2017 DAU is based on an annual capacity assessment process that takes into account the completed 2016 Undertaking baseline capacity assessment.[1093]

Under Part 7A of Aurizon Network's 2017 DAU proposal, capacity assessments will:

- be undertaken on the same date each year as the date the QCA publishes the 2016 Undertaking baseline capacity assessment report and when variations in system operating assumptions materially changed expected existing capacity in a coal system (cl. 7A.4.2(a)). This could occur, for example, where changes in payloads significantly affect capacity and therefore require a review of SOPs
- use the same modelling methodology in its previous capacity assessment or provide reasons for any change in approach (cl. 7A.4.2(b)(v))
- include its consideration of:
  - consultation outcomes with access holders, access seekers (and, where applicable, their customers and train operators) and relevant supply chain groups (cls. 7A.4.2(b)(i),(ii))
  - Access Agreement terms within each coal system (cl. 7A.4.2(iv)(A))
  - interfaces between Aurizon Network’s rail infrastructure and other parts of the supply chain (cl. 7A.4.2(iv)(B))
  - strategic train plans for that coal system.

Aurizon Network proposed to engage an expert, acceptable to the QCA, to audit the capacity assessment (including the strategic train plans).

[1093] Aurizon Network commenced the baseline capacity assessment under its 2016 Undertaking (cl. 7A.4.1). Refer to Aurizon Network, sub. 1: 2017 DAU mark-up.

QCA analysis and decision

Summary of decision 17.3

- **The QCA's decision is that Aurizon Network's 2017 DAU be amended to reflect the consensus drafting agreed between Aurizon Network and QRC, as submitted in their respective collaborative submissions, so that the following apply:**
  - **(a) Aurizon Network will undertake annual system capacity assessments for information purposes.**
  - **(b) System capacity assessments must have regard to outcomes of consultation with access holders, access seekers, supply chain groups, and port operators.**
  - **(c) System capacity assessments will take account of reasonable requirements in respect of maintenance and repair of each element of the supply chain (including loading facilities, load out facilities and coal export terminal facilities); reasonably foreseeable delays or failures occurring in the relevant supply chain (including mine, port and rollingstock-associated losses); and the supply chain operating mode, among other factors.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in cl. 7A.4.3 of the Amended 2017 DAU at Appendix H.**

Aurizon Network's collaborative submission proposal

Following the collaborative submission process, Aurizon Network submitted that the 2017 DAU be amended to accommodate system capacity assessments (see collaborative submission drafting in cl. 7A.4.3).[1094] This annual system capacity assessment is in addition to the annual capacity assessment to be undertaken in accordance with cl. 7A.4.2 of the 2017 DAU. Pacific National and QRC supported Aurizon Network's collaborative submission proposals.

Under the consensus drafting, Aurizon Network proposed to undertake a system capacity assessment for each coal system for information purposes. Aurizon Network considered the information from a system capacity assessment would benefit access holders and access seekers, as well as customers and train operators.[1095]

Accordingly, the parties reached consensus that system capacity assessments would take account of:

(a) reasonable requirements in respect of maintenance and repair of each element of the supply chain (including loading facilities, load out facilities and coal export terminal facilities)

(b) reasonably foreseeable delays or failures occurring in the relevant supply chain (including mine, port and rollingstock-associated losses)

(c) the supply chain operating mode

(d) the capacity of each element of the supply chain (including loading facilities, load out facilities, rollingstock and coal export terminal facilities).[1096]

[1094] Aurizon Network, sub. 26: Appendix 1.
[1095] Aurizon Network, sub. 26:7.
[1096] Aurizon Network, sub. 26: Appendix 1, Part 12 Amended 2017 DAU; QRC, sub. 29: 3.

Annual capacity assessments

The QRC accepted Aurizon Network's proposal to consider the outcomes of consultation, not the consultation itself.[1097] The QCA agrees that cls. 7A.4.2(b)(i) and (iii), as proposed by Aurizon Network, are reasonable and that it is appropriate to approve these clauses having regard to the legitimate business interests of Aurizon Network and the interests of access seekers (ss. 138(2)(b) and (e)).

System capacity assessments

Following the collaborative submission process, Aurizon Network and the QRC submitted that the 2017 DAU should be amended to include a new system capacity assessment process. Pacific National also agreed with these amendments.[1098]

The QRC proposed a number of significant amendments to the 2017 DAU in its initial submission.[1099] The QRC observed that the baseline capacity assessment adopted by Aurizon Network used a very narrow interpretation of capacity—with rail infrastructure as an isolated asset, ignoring the impact of the operating mode of ports, planned maintenance of loading and unloading facilities and supply chain capability.[1100]

In the consensus submission process, stakeholders proposed that these assumptions be incorporated into the Part 12 definition of 'system capacity'. System capacity is defined as the maximum number of train paths, calculated monthly and annually, that can be provided in respect of each coal system and each mainline and branchline of each coal system, including for any expansion.[1101]

As part of the collaborative process in developing the new system capacity provisions, the QRC agreed to depart from some positions it proposed in its initial submission;[1102] that is, the QRC said it would:

(a) not require separate capacity assessments for expansions. Expansion capacity is included in the system capacity assessment where relevant

(b) depart from its position on the effect of the system capacity assessment, instead agreeing the assessment will be undertaken for information purposes only[1103]

(c) depart from its position that Aurizon Network should be prohibited from contracting any additional capacity where system capacity does not exist[1104]

(d) not require an expert review process for system capacity assessments.[1105]

The QCA considers that if Aurizon Network is able to collect the relevant information on capacity effects of, for example, load-out facilities and port facilities, this should result in a more accurate estimate of system capacity, which should assist in planning processes for the entire supply chain. With the process of extensive consultation built into the capacity review process, an expert assessment should not be necessary. The QRC's view is that the system capacity

1097 QRC, sub. 20: Annexure 1: 8.
1098 Pacific National, sub. 28: 2.
1099 QRC, sub. 20: 24–26.
1100 QRC, sub. 20: 25–26.
1101 Aurizon Network, sub. 26: 2017 DAU mark-up.
1102 QRC, sub. 20: 25.
1103 QRC, sub. 29: 3.
1104 QRC, sub. 20: 26.
1105 Aurizon Network, sub. 26: 7.

assessment is intended to be modelled based on reasonable and real-life forecast assumptions rather than contractual arrangements.[1106] The QCA also notes that cl 7A.4.3(d) of the consensus drafting requires Aurizon Network to promptly publish the outcomes of the system capacity assessment on its website.

Pacific National maintained its support for annual system capacity assessments taking account of reasonable maintenance requirements and reasonably foreseeable delays and constraints in supply chains as this ensures a more accurate view of actual capacity.[1107]

Glencore believed that the annual system capacity assessment should be conducted by an independent body (citing the example of the Hunter Valley Coal Chain Co-ordinator). It submitted that the system capacity model should be developed and maintained by an independent party who is provided with sufficient information to ensure it is realistic. Glencore also considered this independent body should assess capacity prior to the provision of any additional access rights.[1108]

The QRC was supportive of a 'system capacity' approach; however, it also believed that this should be undertaken by an independent expert and not Aurizon Network. The QRC submitted that, in light of Aurizon Network's announced changed maintenance practices,[1109] the issue of information and information control has become very significant, justifying a different role for the expert than previously contemplated. The QRC submitted that all capacity determinations should as a matter of course be undertaken by an independent expert and not Aurizon Network.[1110]

The QCA acknowledges that there may be benefits in having an independent body or expert responsible for undertaking capacity modelling. This includes the potential for the development of a system capacity model that is sufficiently robust that all parties have confidence in relying on it to inform decision-making. Critical to the success of such a model is the support and 'buy-in' of all supply chain participants, including Aurizon Network, above-rail operators, port operators and customers, and the provision by these parties of comprehensive information (such as contractual and supply chain performance information) to the independent modeller as necessary. To be effective, this approach necessarily requires the commitment and ongoing support of all stakeholders.

Given this, the QCA encourages all stakeholders to continue to collaborate on ways to improve system capacity modelling and achieve an alignment of interests, including in relation to independent system capacity modelling. Should this development occur in future, it is open to Aurizon Network to submit a draft amending access undertaking to implement any changes that may be required. However, in the meantime and until such proposals are developed, the QCA considers that the collaborative drafting in cl. 7A.4.3 in which Aurizon Network commits to undertake a system capacity assessment is a significant step in improving system capacity modelling, particularly given that it is underpinned by an extensive consultation process, and one that will be of benefit to all CQCN stakeholders. On the question of whether all capacity modelling should be undertaken by an independent expert, we consider that the provisions in the Amended 2017 DAU (Appendix H) provide an appropriate role for an independent expert to review Aurizon Network's capacity assessments if required, and the expert review process itself

[1106] QRC, sub. 29: 3.
[1107] Pacific National, sub. 61: 22.
[1108] Glencore, sub. 60: 3–4.
[1109] Aurizon Holdings 2018b: 3.
[1110] QRC, sub. 53: 41.

provides for a rigorous and independent review of Aurizon Network's capacity assessment (section 17.6).

Taken overall, Aurizon Network's 2017 DAU when amended to incorporate the proposed consensus drafting in cl. 7A.4.3, should provide a timely, relevant and transparent assessment of system capacity. This is consistent with the public interest in having an efficient network by allowing for accurate allocation of access (ss. 138(2)(a) and (d)), as well as the interests of access seekers and access holders, by reducing information asymmetry (ss. 138(2)(e) and (h)). A transparent assessment of system capacity also promotes the legitimate business interests of Aurizon Network (s. 138(2)(b)), by allowing Aurizon Network to accurately assess its available and committed capacity.

Accordingly, the QCA's decision is that the 2017 DAU be amended to incorporate the drafting in cl. 7A.4.3 of the collaborative submission amendments to the 2017 DAU. However, in response to requests for information, Aurizon Network and QRC clarified that further minor drafting amendments relating to the following were proposed:

- cl. 7A.4.3(a)—Aurizon Network must undertake a static or dynamic (as appropriate) system capacity analysis
- Part 12 definition—the definition of system capacity analysis should refer to a simulation modelling assessment of the system capacity
- cl. 7A.4.3 to 4.5–various cross-references need to be consistent.

For similar reasons to those noted above, the QCA believes these amendments are appropriate.

17.5 Capacity deficits

Aurizon Network's 2017 DAU proposal

A capacity deficit occurs where committed capacity exceeds existing capacity. Aurizon Network's 2017 DAU reflects a number of drafting proposals to accommodate the transition from the 2016 Undertaking (under which a baseline capacity assessment was anticipated to be completed) (cl. 7A.4.3). This allows for circumstances where a capacity deficit report has not been published before the approval date of the UT5 undertaking.

Aurizon Network included a process where the most recent capacity assessment report reveals there is a deficit in capacity for a coal system (cl. 7A.4.3(b)). Under this provision, Aurizon Network must submit to the QCA and publish on its website within 20 days a preliminary report, and must within six months provide a detailed report showing solutions to address the capacity deficit. These provisions align with those applying to a capacity deficit arising from a baseline capacity assessment as set out in the 2016 Undertaking.[1111]

Aurizon Network also proposed that it would use reasonable endeavours to consult with supply chain groups and terminal operators to identify if there are supply chain solutions to the capacity deficit. It must also consult with access holders, customers and train operators if applicable (cl. 7A.4.3(c)). This is in line with its proposals for involvement with supply chain groups where reasonable as noted above. Aurizon Network did not include any reference to affected access seekers, as its view is that a capacity deficit is only relevant to access holders. It also did not include the requirement that Aurizon Network must 'act in good faith' to negotiate

[1111] Aurizon Network, sub. 1: 86–88.

with access holders and access seekers, preferring the term 'act reasonably'. No reference is made either to a dispute process about who will fund or the proportion of funding required.[1112]

QCA analysis and decision

Summary of decision 17.4

- **The QCA's decision is that the approach to capacity deficits in Aurizon Network's 2017 DAU be amended to require that:**
  - **(a) access seekers are involved in decisions regarding capacity deficits where relevant**
  - **(b) Aurizon Network must negotiate 'in good faith' with access holders and access seekers**
  - **(c) any disputes are to be resolved in accordance with Part 11, except disputes about a decision by Aurizon Network that it will not be the funder.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in cl. 7A.4.4 of the Amended 2017 DAU at Appendix H.**

Aurizon Network's proposal accommodates the scenario where the baseline capacity assessment is completed under the 2016 Undertaking, but any capacity deficit matters are addressed under the UT5 undertaking. These essentially transitional amendments are no longer required given the QCA’s approval of the BCAR under UT4, which did not identify a capacity deficit. Nonetheless, capacity deficit provisions of Aurizon Network’s 2017 DAU apply to the annual capacity assessments which update the BCAR.

Where a capacity deficit is identified, the QCA notes that there is a range of possible solutions to address a capacity deficit, including:

(a) below-rail operational changes (for example, SOP amendments)

(b) capacity trading

(c) above-rail supply chain options

(d) below-rail expansion options.

Given this, it is reasonable for Aurizon Network to consult with affected parties to identify options to address a capacity deficit.

The provisions to require consultation with supply chain groups and terminal operators on a reasonable endeavours basis are also considered appropriate. The drafting retains an obligation to consult with access holders, customers and train operators in regard to the capacity deficit. This is also supported by the QRC.

The QCA agrees with the process included for reporting to the QCA on the outcomes of the assessment of capacity deficit and proposed solutions.

However, the QCA considers that it is not appropriate to approve the following aspects of Aurizon Network’s 2017 DAU:

(a) Clauses 7A.4.3(c) and (e)—the QCA’s view is that a capacity deficit is also relevant to access seekers, given they may well be directly affected by a capacity deficit. The QCA notes that the QRC’s submission promoted this approach with respect to s. 138(2)(e).[1113]

[1112] Aurizon Network, sub. 1, 2017 DAU.

(b) Clause 7A.4.3(e)(ii)—the QCA considers that the term 'act in good faith' is appropriate, rather than 'act reasonably'. ‘Act in good faith’ is consistent with the negotiation principle in s. 100(1) of the QCA Act; also, the term 'act reasonably' may imply a lower level of commitment to the relevant negotiations on the part of Aurizon Network. The QRC and Pacific National’s submissions promoted this approach (ss. 138(2)(a),(d),(e) and (h)).[1114]

(c) Clause 7A.4.3(e)(ii)—the reference to dispute resolution under Part 11 should be included to provide certainty to the processes to resolve differences. The QRC, Anglo American and Pacific National supported this approach (ss. 138(2)(e) and (h)).[1115]

Aurizon Network stated in its response to the draft decision that it has no substantive issues in relation to including access seekers in the consultation process of identifying solutions to a capacity deficit and requiring it to negotiate in good faith with affected access holders and access seekers in terms of funding arrangements for an expansion.[1116] Pacific National also supported this change, suggesting that train operators should also be involved in capacity deficit decision-making where relevant.[1117]

Aurizon Network, however, did not agree with the reference to dispute resolution under Part 11, stating that it does not volunteer to grant the QCA the power under UT5 to require it to fund an expansion to which a dispute over funding arrangements relates.[1118] Aurizon Network proposed alternative drafting, which provides that any matter in relation to funding arrangements may be referred as a dispute under Part 11, but not Aurizon Network’s decision that it will not be the funder.[1119]

The QCA considers that it is important that parties have recourse to dispute resolution in the event they are unable to agree. This will provide certainty to parties around the processes for resolving a dispute and is consistent with the negotiate-arbitrate approach on which Part 5 of the QCA Act is based. The QCA’s view is that it is appropriate for Aurizon Network’s undertaking to include a requirement for disputes under this clause to be heard in accordance with Part 11. The QCA also considers that Aurizon Network’s proposed clarification that its decision not to fund an expansion cannot be referred to a dispute (but any other matter relating to funding arrangements can be) is consistent with the existing approach to disputes in Part 8.

For the reasons set out above, the QCA is of the view that it is not appropriate to approve Aurizon Network’s 2017 DAU relating to capacity deficits, after having regard to the factors in s. 138(2) including the object of Part 5 of the QCA Act (s. 138(2)(a)) and the interests of access seekers and access holders (ss. 138(2)(e) and (h)). This is because in order to further the object of Part 5, the process for dealing with capacity deficits needs to be transparent, involve consultation with all those likely to be affected—including access seekers— and provide a mechanism for addressing any such capacity deficits, including by way of good faith negotiations and a dispute resolution process. Such a framework is also in the interests of access seekers and access holders. The framework proposed in the 2017 DAU is required to be amended to be appropriate to achieve these outcomes.

[1113] QRC, sub. 20: Annexure 1: 12.
[1114] QRC, sub. 20: Annexure 1: 12; Pacific National, sub. 19: 9.
[1115] QRC, sub. 20, Annexure 1: 12; Pacific National, sub. 19: 9; Anglo American, sub. 18: 19.
[1116] Aurizon Network, sub. 40: 289.
[1117] Pacific National, sub. 61: 22.
[1118] Aurizon Network, sub. 40: 289.
[1119] Aurizon Network, sub. 48: 149.

The QCA considers that it would be appropriate to amend the approach to capacity deficits in Aurizon Network's 2017 DAU, with the required amendments provided in cl 7A.4.4 at Appendix H. The QCA considers that these amendments provide an appropriate balance of the factors in s. 138(2) including between the object of Part 5 (s. 138(2)(a)),the legitimate business interests of Aurizon Network (s. 138(2)(b)) and the interests of access seekers and access holders (s. 138(2)(e) and (h)).

17.6 Expert review of capacity assessments

Aurizon Network's 2017 DAU proposal

Expert review of annual capacity assessments

Aurizon Network submitted that its 2016 Undertaking capacity expert provisions are imprecise and the scope of the expert's work is essentially undefined. Aurizon Network considered that a more accurate capacity assessment is likely to be achieved by an appropriately qualified third party auditing Aurizon Network's model rather than an expert putting in place an entirely new model. Aurizon Network also set out the consequences of overstatement or understatement of capacity. For example, if capacity is understated, a capacity deficit could be incorrectly identified and an unnecessary expansion investigated.[1120]

Aurizon Network therefore proposed that the third party expert verification process for annual capacity assessments should follow an expert audit of the model, with Aurizon Network's model being the reference point for the audit process. Aurizon Network indicated that the process would be no less transparent or accountable, but would involve lower cost and time commitments.[1121]

Aurizon Network submitted that its proposed cl. 7A.4.4(b) audit process would:

(a) confirm that input parameters are consistent with the requirements of existing Access Agreements, all relevant laws, as well as the UT5 undertaking (including, the NMPs, relevant system rules and SOPs)

(b) confirm input parameters were correctly applied in Aurizon Network's model

(c) confirm that the preliminary capacity assessment report appropriately and correctly reflects the outcome of the modelling and was otherwise complete and accurate

(d) provide a response process in circumstances where the auditor was unable to provide such confirmation; the auditor is required to make a recommendation on how issues are to be addressed.[1122]

Aurizon Network's cl. 7A.4.4(b) requires the auditor to 'opine' on the above matters rather than to 'confirm'.[1123]

Aurizon Network would provide the expert auditor's report promptly to access holders, access seekers and customers, and on an unredacted basis, to the QCA (cl. 7A.4.2(d)).

Aurizon Network will then within 20 days respond to the auditor's report, with its view as to whether the audit recommendation is reasonable (cl. 7A.4.2(e)). If considered not reasonable, Aurizon Network will provide reasons. If the recommendation is considered reasonable, Aurizon

[1120] Aurizon Network, sub. 1: 87.
[1121] Aurizon Network, sub. 1: 87–88.
[1122] Aurizon Network, sub. 1: 88.
[1123] Aurizon Network, sub. 1, 2017 DAU mark-up.

Network will modify its modelling process appropriately and amend the preliminary capacity assessment report.[1124]

QCA analysis and decision

Summary of decision 17.5

- **The QCA's decision is that the proposals in respect of expert review of capacity assessments in Aurizon Network's 2017 DAU be amended to require that:**
  - **(a) subsequent capacity assessments are subject to 'review' rather than 'audit'**
  - **(b) for annual capacity assessments, the review should identify changes since the previous capacity assessment, whether changes to assumptions are required, and the appropriate application of assumptions.**
  - **(c) notice is provided to access holders if there is insufficient capacity to meet the requirements of a new access agreement. This obligation applies for additional contracted capacity and not capacity transfers.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in cl. 7A.4.2 and cl. 7A.4.5 of the Amended 2017 DAU at Appendix H.**

Expert review of annual capacity assessments

The QCA finalised its assessment of Aurizon Network's BCAR under the 2016 Undertaking provisions. As part of its assessment, the QCA engaged an expert to review Aurizon Network's BCAR. While the expert identified some modelling issues, it found these are unlikely to materially impact the modelling outputs.[1125]

Aurizon Network expressed a view that the third party verification process should be framed so that the expert does not develop their own assessment of capacity from first principles, and therefore proposed an audit process rather than a review process.[1126] It was concerned that the expert review process has no defined scope of work. It proposed that the expert review adopt the scope of work it proposed in its 2017 DAU, but that it be characterised as a 'review'. Aurizon Network also disagreed with the expert being able to request making changes in assumptions.[1127]

The QRC noted that an audit process defeats the purpose of an independent review, part of which is to interrogate the assumptions used in the capacity assessment. It would narrow the expert's role to identifying application errors. The QRC considered that a broad first principles review of capacity is an important way for stakeholders to be confident about the accuracy of the capacity assessment.[1128] QRC considered it was important to clarify the role of the expert and that this should be a complete and fresh review and not an audit.[1129] The QRC subsequently commented that the role of the expert should change (section 17.4).

Pacific National noted that an audit narrows the scope to a verification of the capacity assessment calculations. Pacific National proposed the word 'review' in cls. 7A.4.2 and 7A.4.4,

[1124] Aurizon Network, sub. 1: 88.
[1125] GHD 2018.
[1126] Aurizon Network, sub. 1: 87.
[1127] Aurizon Network, sub. 40: 290–291.
[1128] QRC, sub. 20: 24.
[1129] QRC, sub. 53: 41.

consistent with the 2016 Undertaking provisions.[1130,1131] QCoal Group noted that the role of the expert as set out in the 2016 Undertaking has the potential to improve the quality of information from a capacity assessment. QCoal supported the QRC's proposed amendments.[1132] Anglo American proposed generally that the 2016 Undertaking provisions be reinstated in regard to expert review.[1133] Glencore considered that an audit is not efficient or sufficient, and questioned whether Aurizon Network's model output bears a sufficiently close relationship to what the rail network is able to deliver as part of an integrated coal chain.[1134]

The QCA does not consider that the 2016 Undertaking requires that the expert necessarily needs to develop an entirely new model. Rather, as originally submitted in Aurizon Network's 2014 DAU, it requires the expert to undertake a 'review' of the capacity assessment. This does not necessarily entail developing a new model from first principles as suggested by Aurizon Network.

Unless there are material changes in circumstances, it is anticipated that the model itself would remain unchanged from the baseline capacity assessment. In fact, it is a requirement of cl. 7A4.2(b)(v) of the 2017 DAU that Aurizon Network use the same modelling methodology in its previous capacity assessment (or baseline capacity assessment), or to give reasons for a departure from this.

With the support of stakeholders, the QCA considers that the annual capacity assessments be subject to 'review' by an independent expert rather than a compliance-style 'audit'. This should provide confidence and certainty to access holders and access seekers that the capacity assessment is based on rigorous analysis (ss. 138(2)(e) and (h)). An audit process, of itself, will not ensure sufficient certainty and credibility given its more restricted scope, and may not for example address whether underlying assumptions and inputs within the model remain appropriate (ss. 138(2)(a), (d) and (h)).

The QCA considers that the proposed scope for the audit as set out in cl. 7A.4.4(b) (as submitted) of the 2017 DAU is too constrained. We consider that the review process should provide for:

- reviewing the validity of assumptions and, if appropriate, making changes to assumptions used in capacity assessments and the subsequent capacity assessment modelling
- reviewing to ensure that the modelling assumptions are applied correctly
- identifying and taking account of significant changes since the previous capacity assessment where considered appropriate.

The QCA agrees with stakeholders that, to be of benefit in providing transparency and confidence in capacity assessments, the expert's review (if it is considered necessary) should not be limited to the narrow scope proposed by Aurizon Network. The aim of the capacity assessments is to provide transparency and confidence regarding capacity, as well as identifying to all stakeholders where capacity is constrained, or even potentially in deficit. This should be an informative process which ultimately serves to promote the efficient operation, use of and investment in the network. To achieve this, it is important that the expert review process has

1130 Pacific National, sub. 19: 9.
1131 Pacific National, sub. 61: 22.
1132 QCoal Group, sub. 16: 6.
1133 Anglo American, sub. 18: 19.
1134 Glencore, sub. 60: 2–3.

the ability to review assumptions, including requesting changes to assumptions if it is reasonably considered necessary by the expert for the purpose of the review.

We consider that there are a number of factors that are relevant to Aurizon Network's legitimate business interests and provide reasonable limits on the scope of the expert review, should it be required. These include the drafting of cl. 7A.4.5(b) in the Amended 2017 DAU (Appendix H) which states that the expert may only request Aurizon Network to run scenarios that it 'reasonably' considers necessary. Further, Aurizon Network has considerable discretion in its response to the expert's report, only being required to modify its modelling where it considers that the expert's recommendation is reasonable (this is discussed further below).

The QCA considers that the drafting in cl. 7A.4.5 of the Amended 2017 DAU (Appendix H) provides a reasonable balance of the factors in s. 138(2) including the interests of Aurizon Network, access seekers and access holders (ss. 138(2)(b), (e) and (h)) and will support the object of Part 5 in promoting the efficient operation, use of and investment in the CQCN (s. 138(2)(a)). The QCA therefore proposes to specify the requests the expert may make as set out in cl. 7A.4.5(b) of the Amended 2017 DAU (Appendix H).

Aurizon Network has not proposed to use reasonable endeavours to adopt reasonable recommendations of the expert audit report (cl. 7A.4.2(d)(v)(4)). Aurizon Network's 2017 DAU proposal sets out a series of steps that give Aurizon Network discretion as to whether or not it will adopt changes recommended by the expert undertaking the audit. The QRC was agreeable to this amendment, but considered that Aurizon Network should notify access holders where it intends entering into a new Access Agreement if the independent expert has determined there is insufficient available capacity to meet the demand of the new Access Agreement. Otherwise, access holders would not be aware that Aurizon Network is entering into an agreement with access seekers where the expert believes there is insufficient capacity.[1135]

In the QCA's view, the 2017 DAU drafting would allow Aurizon Network to either make no changes, or only selectively make changes, to the preliminary capacity assessment. While the clause requires Aurizon Network to provide transparent reasons why it considers the expert report is not reasonable, Aurizon Network retains a very wide discretion (cl. 7A.4.2(e)(ii)). However, the QCA proposes to accept the proposal, subject to addressing the QRC's proposal to notify access holders if there is insufficient capacity to meet the requirements of a new access agreement. Aurizon Network proposed an amendment to this notification requirement to clarify that it only applies when Aurizon Network intends to contract for additional capacity (and not the transfer of existing capacity).[1136] The QCA considers that this proposed amendment is reasonable and consistent with the intent of the notification obligation.

The QCA considers that the 2017 DAU provisions relating to potential modifications to the 'modelling process' are appropriate (cls. 7A.4.2(e) and (f)). The QCA proposes to amend Aurizon Network's 2017 DAU to include the notification requirement set out in cl. 7A.4.2(g) of the Amended 2017 DAU (Appendix H).

The QCA considers that its proposed changes to the 2017 DAU in relation to expert review of capacity assessments are appropriate, having regard to the factors set out in s. 138(2) including the interests of access holders and access seekers (s. 138(2)(e)), as they would provide better information and greater certainty to those parties. The changes do not in the QCA's view detract from the legitimate business interests of Aurizon Network (s 138(2)(b)). Even if there is

[1135] QRC, sub. 20: 24–25; QRC, sub. 29: 9.
[1136] Aurizon Network, sub. 40: 290–291.

some impact on Aurizon Network's legitimate business interests, the QCA considers on balance that the amendments proposed in this section are appropriate.

17.7 Confidentiality

Aurizon Network's 2017 DAU proposal

The 2017 DAU proposed the following:

- Aurizon Network is to use reasonable endeavours to enter into confidentiality obligations that do not prevent disclosure of information, and permit disclosure of information required by the undertaking, relevant to capacity assessments and other matters.
- Disclosure to the QCA of confidential information relevant to capacity assessments is still required to enable the QCA to evaluate whether the capacity assessment is robust and reasonable
- Where consent for release of information cannot be obtained, information may be aggregated and provided on an unredacted basis.

Aurizon Network proposed that the expert's final audit report would be subject to confidentiality obligations (cl. 7A.4.2(d)(v)).

QCA analysis and decision

Summary of decision 17.6

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals relating to confidentiality provisions for capacity assessments.**

The QRC noted that Aurizon Network's proposal is consistent with the 2016 Undertaking with respect to confidential information, and accepted cl. 7A.4.2(d)(v).[1137]

The QCA considers that Aurizon Network's confidentiality obligations are reasonable and should be applied where a capacity assessment process is undertaken.

In the context of capacity assessments, access seekers should have the right to protect information that is critical to, for example, their competitive advantage. At the same time, however, capacity assessments must include all critical operational information to allow for stakeholders to have an accurate understanding of the network's capacity. Aurizon Network's 2017 DAU meets these principles and is considered appropriate to approve. For these reasons, these provisions achieve an appropriate balance between the interests of access holders and access seekers, and Aurizon Network's legitimate business interests (ss. 138(2)(b), (e) and (h)).

17.8 System operating parameters amendment processes

Aurizon Network's 2017 DAU proposal

System Operating Parameters (SOPs) contain Aurizon Network's core assumptions for operating each element of the supply chain within each coal system.

Under cl. 7A.5 of Aurizon Network's 2017 DAU, Aurizon Network will maintain SOPs for each coal system at all times. The SOPs seek to be consistent with the relevant assumptions in the baseline capacity assessment and subsequent capacity assessments.

[1137] QRC, sub. 20, Annexure 1: 8.

Aurizon Network proposed to consult with all access holders, access seekers, customers, supply chain groups, and affected infrastructure providers, infrastructure service providers and railway operators on all capacity and operating assumptions (SOPs and other parameters) that will underpin Aurizon Network's baseline capacity assessment and subsequent capacity assessments. Aurizon Network will respond to stakeholder submissions on the SOPs within 15 business days, or a longer period if agreed by the QCA.

Aurizon Network will review the SOPs for a coal system as soon as practicable after it becomes aware that a sustained change has occurred, or will occur, to the coal system that materially affects those SOPs. This includes where a new coal terminal is connected to the rail infrastructure or a major expansion is completed.

Aurizon Network proposed to submit SOPs to the QCA on an unredacted basis, and publish the SOPs on its website in a way that is consistent with honouring confidentiality obligations it is unable to waive with third parties.

QCA analysis and decision

Summary of decision 17.7

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of system operating parameters.**

The QCA's decision is to approve the SOP provisions as proposed by Aurizon Network. The QCA notes that Aurizon Network has proposed provisions consistent with existing arrangements except for amendments to provide for the BCAR to be completed under the 2016 Undertaking provisions.

Stakeholders did not raise any concerns with Aurizon Network's proposal.

The 2017 DAU approach to SOPs is consistent with the legitimate business interests of Aurizon Network (s. 138(2)(b)) and achieves an appropriate balance between the interests of access seekers and access holders (ss.138(2)(e) and (h)). It also advances the object of Part 5 (s. 138(2)(a)) by providing timely and transparent information on the operation of the network (s. 138(2)(a)).

17.9 Network Development Plan

Aurizon Network's 2017 DAU proposal

Under cl. 7A.6 of the 2017 DAU, the Network Development Plan (NDP) is an overarching strategic tool providing the most efficient way of disseminating information to supply chain participants on the cost profiles for various rail infrastructure capacity expansions.

The NDP identifies the medium-term capacity options that will meet future demand for access in each coal system and includes options for developing or improving the operational performance, capacity and cost of throughput on the CQCN. The NDP identifies the particular track segments within each coal system that are capacity-constrained.

The NDP provides all supply chain participants with:

- a dynamic capacity review in a five-year planning horizon, taking into account the expansion options being at least at the pre-feasibility stage; existing TSEs; and TSEs of access seekers (and renewing access seekers (if any)) who have properly completed their access applications and have provided the information set out in cl. 4, Schedule B of the undertaking

- growth scenarios within each coal system linking to a port optimisation project (where Aurizon Network, acting reasonably, considers this appropriate)
- the impact of operational constraints on existing capacity, committed capacity and available capacity
- the scope, standard and preliminary costs of proposed expansion projects under investigation as a concept study, pre-feasibility study or feasibility study
- investigations being undertaken or being considered to inform the next NDP update.

Aurizon Network can provide static-capacity modelling outputs for planned rail infrastructure projects that are scheduled to occur within more than five years, if it considers it appropriate.

The NDP will be reviewed and updated annually or more frequently as considered necessary (cl. 7A.6(c)). Conditions for when the review and update process should be undertaken include when there are material changes in circumstances; expansion infrastructure is being completed and new coal basins and port terminals are being connected to Aurizon Network's infrastructure; and the QCA or 60 per cent of access holders request it.

In developing the NDP, Aurizon Network must have regard to current SOPs, System Rules and NMP. The draft NDP should be provided to the QCA and all relevant supply chain participants, who can then make submissions to Aurizon Network on the draft NDP.

The draft NDP can be peer reviewed if requested by access holders, access seekers and their customers.

Aurizon Network must take relevant supply chain participants' views into account in finalising the NDP.

Disputes regarding the contents of the NDP may be referred to the QCA for dispute resolution.

QCA analysis and decision

Summary of decision 17.8

- **The QCA’s decision is to approve Aurizon Network's 2017 DAU proposals in respect of Network Development Plans.**

The QCA’s decision is to approve the provisions for Aurizon Network to develop its Network Development Plans as proposed by Aurizon Network. The QCA notes that Aurizon Network has proposed provisions consistent with existing arrangements.

Stakeholders did not raise any concerns with Aurizon Network’s proposal.

The 2017 DAU approach to Network Development Plans provides an appropriate balance between the interests of Aurizon Network (s. 138(2)(b)) and those of access seekers and access holders (ss. 138(2)(e) and (h)). It also advances the object of Part 5 (s. 138(2)(a)), by providing timely information relating to efficient investment in the network (s. 138(2)(a)).

17.10 Network Management Principles

Aurizon Network undertakes operational decisions to make contracted train service entitlements[1138] (TSE) available for use by train operators. The Network Management Principles (NMPs), which represent a general framework for managing operators' use of the CQCN, are set out in Schedule G of the 2017 DAU.

The NMPs in Schedule G of the 2017 DAU cover:

(a) the forms of train plans to be developed by Aurizon Network (cls. 2–5)

(b) the train control principles—to facilitate the safe running of train services and network possessions in delivering the daily train plan (DTP) (cl. 7)

(c) the contested train paths principles—to guide the allocation methodology for mutually exclusive requests by two or more parties for a train path during the development of the intermediate train plan (ITP) (cl. 8)

(d) the traffic management decision making matrix (TMDMM)—to guide the decisions in resolving conflicts in the day-to-day management of trains (cl. 9).

The implementation of the NMPs is prescribed in greater detail in the relevant system rules—system rules are documents separate to the access undertaking, and are developed (and maintained) in consultation with stakeholders to address issues relevant to each specific rail system.

Train plans

Aurizon Network's 2017 DAU proposal

Train plan development plays a significant role in the process of Aurizon Network meeting its contracted TSE obligations.

Schedule G of the 2017 DAU requires that Aurizon Network develop four types of train plans: a strategic train plan (STP); a master train plan (MTP); an intermediate train plan (ITP); and a daily train plan (DTP). Other than the STP, the train plans are in a tabular timetable form that can be used for scheduling purposes, with the level of detail and certainty (that is, the likelihood of non-variation to the plan) increasing as the scheduling horizon shortens.

A general description of these train plans, in accordance with the 2017 DAU, is at Table 92 below.

[1138] A TSE is an access holder's entitlement to operate or cause to be operated a specific number and type of train services on the CQCN within a specific time period and in accordance with specified operational factors.

Table 92 Train plans required under 2017 DAU

Train plan	*Purpose*	*Frequency of publication*	*Period*
STP (cl. 2)	To demonstrate Aurizon Network has sufficient capacity to deliver existing TSEs	Annually	1–2 years
MTP (cl. 3)	To demonstrate how Aurizon Network plans to deliver TSEs in each coal system, in a tabular timetable form	Monthly	1–3 months
ITP (cl. 4)	To act as an intermediate scheduling step in progressing from the MTP to the DTP	Weekly	7 days
DTP (cl. 5)	To indicate all scheduled train services and planned possessions, urgent possessions and emergency possessions (to the extent known) for a particular day	Daily	1 day

Under the 2017 DAU, Aurizon Network is to provide these train plans to the relevant stakeholders (for example, access holders), as complete and transparent documents, subject to Aurizon Network's confidentiality obligations (Sch. G, cls. 3(f), 4(f) and 5(c)). The 2017 DAU also requires Aurizon Network to use reasonable endeavours to agree to confidentiality obligations that permit disclosure of information required by the undertaking in relation to the train plans (Sch. G, cls. 3(g), 4(g) and 5(d)).

Specific details of the train plans are provided below.

Strategic train plan

Consistent with its stated purpose, the 2017 DAU requires the STP to provide an estimate of:

- existing capacity on the CQCN
- capacity necessary to meet Aurizon Network's contractual TSE obligations for at least the subsequent financial year (but not more than two years) (Sch. G, cl. 2(e)).

Developing the STP forms part of the annual capacity assessment that Aurizon Network is required to undertake under the 2017 DAU (Sch. G, cl. 2(b)).

Master train plan

The MTP reflects the translation of TSEs, as specified in individual Access Agreements, into a consolidated format that can readily be used for scheduling purposes. It forms a baseline for the ITP and DTP, which have shorter planning horizons (seven days and one day respectively).

Accordingly, the 2017 DAU requires the MTP to cover at least one month (up to three months), and to be in a tabular timetable form that is readily convertible to an ITP and DTP (Sch. G, cl. 3.1(b)). In developing the MTP, Aurizon Network has to consider, amongst other things, the impact of temporary closures of the network for the purposes of maintenance, construction or other activities that may affect capacity (Sch. G, cl. 3.1(c)).

The 2017 DAU also specifies a number of circumstances (for example, a planned possession) where Aurizon Network can make amendments to an MTP (Sch. G, cl. 3.2(a)). Further, Aurizon Network is required to notify, and gain written acknowledgements from, access holders whose TSEs would be affected by a proposed MTP amendment (Sch. G, cl. 3.2(b)).

Intermediate train plan

Scheduling an ITP is the intermediate step in progressing from the MTP to the DTP (Sch. G, cl. 4(a)). At the ITP stage, an additional consideration for Aurizon Network is train orders—train orders are railing requests for a nominated period of time made by access holders and train operators (Sch. G, cl. 4(a)).

Train orders play an important role in the CQCN, as most of the coal traffic is cyclic traffic (as opposed to timetabled traffic), where the TSEs are defined in terms of the number of train services within a particular period of time, for example, a year or a month (as opposed to being defined in terms of a specified train path on a particular day and/or week) (Part 12 of the 2017 DAU).

The contested train paths principle would be applied at the ITP stage if the process of planning cyclic traffic involves the allocation of a contested train path amongst access holders (Sch. G, cl. 4(d)).

The 2017 DAU also requires the ITP to provide information in relation to available train paths, which is not required for the MTP (Sch. G, cl. 4(e)).

Daily train plan

A DTP is produced for each day, showing all scheduled train services and network possessions (Sch. G, cl. 5.1). It draws from the ITP, and may incorporate scheduling adjustments permitted under the 2017 DAU (Sch. G, cl. 5.4). Similar to an MTP amendment, Aurizon Network is required to consult access holders whose scheduled train services would be affected by a proposed DTP that is in variation to the ITP (Sch. G, cl. 5.4(d)). Further, the 2014 DAU limits the circumstances where Aurizon Network can amend a DTP once it is scheduled (Sch. G, cl. 5.5).

Beyond its use as a scheduling tool, the DTP schedule forms the base information for performance monitoring, including for the purposes of the quarterly network performance report required under the 2017 DAU (Sch. G, cl. 5.3).

QCA analysis and decision

Summary of decision 17.9

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of provisions for train plans**.

Stakeholders generally did not object to Aurizon Network's proposal. Although, Anglo American submitted that the current ITP arrangements are very rigid, making it difficult to be flexible in dealing with issues that later arise leading up to delivery of the schedule. It submitted the ITP should be reviewed and a rolling 7 day plan be considered, while maintaining the 96 hour rolling schedule, to enable better recovery of losses. It also expressed concerns about how system availability is determined and reported.[1139]

The QCA notes that Aurizon Network has proposed provisions for train plans that are consistent with existing arrangements. In regard to Anglo American's comments that the current ITP arrangements should be reviewed to promote flexibility, the QCA recognises the need for balance in providing sufficient flexibility to accommodate inevitable variation and the need for certainty. At this stage, the QCA does not propose to amend the NMPs in Aurizon Network's 2017 DAU. However, it would be open to Aurizon Network and stakeholders to review this matter should there be support for this and to propose amendments in subsequent access undertakings should it be considered beneficial.

[1139] Anglo American Coal Australia, sub. 57: 9–11.

The QCA notes there is a formatting error with a cross-reference in cl. 4(e) of Schedule G of Aurizon Network's 2017 DAU and subsequent versions of DAU drafting submitted by Aurizon Network during the consultation process. The QCA has used 'clause 4(f)(ii)' for the cross-reference in the Amended 2017 DAU included in Appendix H. This is the cross-reference Aurizon Network provided in its mark-up of the 2017 DAU against the 2016 Undertaking.[1140]

The QCA considers that the proposed processes for train plans in the 2017 DAU, as reflected in the NMPs, appropriately balance the legitimate business interests of Aurizon Network with the interests of access seekers and access holders (s. 138(2)(b), (e) and (h)). Transparency of train plans in the NMPs also promotes efficient allocation of CQCN capacity, which promotes the object of access (s. 138(2)(a)). Transparency also promotes the public interest (including the public interest in having competition) by providing confidence to the above-rail market that scheduling will be non-discriminatory and by promoting effective supply chain coordination (s. 138(2)(d)).

Train control principles and contested train paths

Aurizon Network's 2017 DAU proposal

The purpose of the train control principles is to facilitate the safe running of train services, and the commencement and completion of network possessions, in delivering the DTP (Sch. G, cl. 7.1). These principles apply along with the TMDMM. These are used to guide the decisions in resolving conflicts in the day-to-day management of train traffic (for example, deciding which train is given priority if two trains are behind the DTP schedule) (Sch. G, cl. 7.4).

The 2017 DAU permits Aurizon Network to depart from the TMDMM for a period following an incident that materially affects its ability to deliver the DTP (Sch. G, cl. 7.4(c)). The range of incidents is defined in the 2017 DAU, and includes force majeure events.

The 2017 DAU outlines the contested train paths principles that Aurizon Network will follow to determine which access holder is allocated a contested train path, for the purpose of developing the ITP (as opposed to the TMDMM which applies in the day-of-operation environment) (Sch. G, cl. 8). As stated in the 2017 DAU, a key purpose of these principles is to ensure access holders are not unfairly differentiated (Sch. G, cl. 8.1).

The contested train paths principles are set out in order of priority in cl. 8.3 of Schedule G, and they include a comparison of how far behind the access holders are for their use of TSEs in a particular period of time. To support this ITP scheduling process, Aurizon Network is required to provide a reconciliation report of TSE consumption to each access holder (and its train operator) at the end of each ITP period (seven days by default) (Sch. G, cl. 8.2). The report shows the TSEs that have been used within a particular period of time, for example, a year or a month, and the remaining balance of TSEs.

[1140] This was submitted as part of Aurizon Network's explanatory material submitted on 30 November 2016.

QCA analysis and decision

Summary of decision 17.10

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposals in respect of train control principles and contested train paths provisions.**

Stakeholders did not generally object to Aurizon Network's proposal in the 2017 DAU. The QRC submitted proposed drafting, which the QCA considers to be consistent with Aurizon Network's framework for allocating available capacity.[1141]

Aurizon Coal raised an issue with the operation of the contested train path principles, claiming that it has experienced some workability issues since the implementation of Aurizon Network's 2016 Undertaking. It submitted that principles 8.3(a)(iii) and (iv) in the 2016 Undertaking (unchanged in the 2017 DAU) have created unintended outcomes as they are now considered decision points in their own right. It proposed reinstating the equivalent 2010 Undertaking principles as modifiers to (a) manage rail access portfolios with multiple access rights (pooling) without going through the short term transfer process; and (b) adjust TSE consumption data for the impact of 'Aurizon Network Cause' and force majeure for allocation of contested train paths to the access holder most behind month to date or year to date.[1142]

The QCA notes that Aurizon Network has proposed train control principles and contested train paths that are consistent with existing arrangements. We acknowledge the issue raised by Aurizon Coal in terms of the operation of the contested train path principles and the concern about unintended consequences. We also note that the change proposed by Aurizon Coal will affect all access holders and train operators, as well as Aurizon Network. The QCA considers that, at this stage, it would be of benefit to monitor this arrangement and its outcomes, given it is a relatively recent change (since UT4), with a view to reconsidering it in light of further experience and input from stakeholders, including train operators. For this reason, the QCA approves the current drafting of Aurizon Network's 2017 DAU proposals in respect of train control principles and contested train path provisions.

For the reasons referred to above, the QCA considers that Aurizon Network's 2017 DAU approach to train control principles and contested train paths appropriately balances the legitimate business interests of Aurizon Network with the interests of access seekers and end customers (ss. 138(2)(b), (e) and (h)). It is also consistent with the efficient investment in, operation and use of below-rail infrastructure (s. 138(2)(a)) and promotes effective supply chain coordination and efficiency, which are consistent with the public interest and other matters we consider relevant (s. 138(2)(d) and (h)).

17.11 Obligation to maintain the network and minimise disruption to train services

Aurizon Network's operation of the network, including its approach in terms of scheduling maintenance, may have a significant impact on the scheduling of access holders' train services and, ultimately, on supply chain throughput. Aurizon Network's obligations regarding network planning and scheduling are addressed in s. 7A.2 and Schedule G of the 2017 DAU, as well as in System Rules and individual Access Agreements.

[1141] QRC, sub. 20, Annexure 2.
[1142] Aurizon Coal, sub. 55: 4–5.

The QCA sought comment from stakeholders on whether the 2017 DAU and associated standard agreements are appropriate in relation to Aurizon Network's obligations to maintain and operate the network and minimise disruptions to train services.[1143] This request was made after Aurizon Network announced changes to maintenance practices which it indicated could reduce throughput across the CQCN.[1144]

QCA analysis and decision

Summary of decision 17.11

- **The QCA's decision is that Aurizon Network's 2017 DAU be amended to require that Aurizon Network uses reasonable endeavours to minimise disruption to train services when planning and implementing operational constraints on the network.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in cl. 7A.1.2 of the Amended 2017 DAU at Appendix H**

Aurizon Network emphasised the importance of its day of operations engagement with mines, operators and coal export terminals in managing operational variations in a way that minimises supply chain disruption. It said that, through this engagement:

> Aurizon Network balances its own business interests (in terms of ensuring that rail infrastructure is safe and fit for purpose) and the interests of access seekers and holders within the confines of the access regime framework.[1145]

Aurizon Network submitted that its obligations to maintain the network and minimise disruption to train services are already embedded in the access undertaking and its asset management practices, and that any further obligation would be unnecessary, unreasonable, contrary to its legitimate business interests and inappropriate. It considered it highly unlikely that 'minimising disruptions' in the day of operations could be practically defined, resulting in an open-ended and unquantifiable exposure. It also noted that disruptions are typically not the consequence of Aurizon Network's actions and the obligation would make the access provider liable for disruptions elsewhere in the supply chain.[1146]

Aurizon Network also submitted that the draft decision does not permit it to recover at least the efficient costs of operating the CQCN in a flexible manner and that it had sought to align its maintenance activities with the draft decision.[1147]

Stakeholders were particularly concerned about the impact of Aurizon Network's changed maintenance practices. The QRC noted the following impacts: misalignment of system closures and planned maintenance work due to amendments to long-term maintenance plans at short notice; impacts of maintenance work on train services in the day of operations; reduction in the number of available or useable train paths; and lack of reliable operational information.[1148]

Aurizon Coal submitted that Aurizon Network's new maintenance and operating practices, which place primacy on maintenance over the operation of train services, have had a direct and detrimental impact on its efficient utilisation of the infrastructure (including the cessation of supply chain productivity improvements, such as longer trains). Aurizon Coal highlighted the

[1143] QCA 2018b.
[1144] Aurizon Holdings 2018b: 3.
[1145] Aurizon Network, sub. 64: 23.
[1146] Aurizon Network, sub. 64: 5, 24.
[1147] Aurizon Network, sub. 64: 5
[1148] QRC, sub. 65: 5–6.

need for network maintenance to be undertaken in conjunction with the optimisation of train operations in a way that maximises the productive efficiency of the overall supply chain. It noted that the opportunity cost associated with lost throughput due to the existing practice of giving first pathing rights to network maintenance would be reduced where the weekly ITP scheduling process prioritises train services ahead of network maintenance activities that can be flexibly planned and/or are less time-sensitive.[1149]

Pacific National remained concerned about the impact of these changes, and in particular, the potential for parties not related to Aurizon Network to be disproportionately affected. It submitted that UT5 should be strengthened to ensure there are explicit requirements for Aurizon Network to maintain the network, maintain network capacity and availability and minimise network disruptions. Further, it should be accountable if contracted paths cannot be delivered as a result of maintenance and operational practices within Aurizon Network's control.[1150]

The QRC believed the impacts of Aurizon Network's conduct are not sustainable and required changes to its 2017 DAU. It submitted that it is important to note that the access agreements and access undertaking are drafted on the basis that Aurizon Network will act in good faith and will seek to deliver access. It stated that the access undertaking and access agreements do not contemplate a circumstance in which Aurizon Network would act in a way as to adversely affect or disrupt the provision of access.[1151]

Glencore and the QRC noted an information imbalance existed between Aurizon Network and access holders/customers.[1152] The QRC considered that this necessitates more specific obligations on Aurizon Network. It considered there is merit in addressing maintenance obligations in the undertaking as well as in standard access agreements. The QRC proposed that the access undertaking include a clearer statement of Aurizon Network's maintenance obligation; acknowledgement that in undertaking maintenance work Aurizon Network should strive to reasonably minimise disruption to train services; clarification of priority between train services and non-essential maintenance and the ability to raise a dispute. It also proposed a 'review point' to assess the effects of the regime. The QRC proposed drafting amendments to reflect this, including an independent compliance audit.[1153]

The QCA recognises that, in a dynamic supply chain environment, the network manager needs to balance a range of factors including delivery of contractual entitlements; maintenance of the network (both planned and unplanned) to ensure it is fit for purpose and compliant with safety requirements; the need for flexibility to accommodate operational variations; and alignment with other elements of the supply chain. The regulatory framework should seek to promote an appropriate balance in the interests of all parties in managing these factors and addressing at times competing priorities. This is consistent with achieving the objective of promoting the economically efficient operation of, use of and investment in, the below-rail network, with the effect of promoting effective competition in related markets.

Moreover, the regulatory framework should also ensure Aurizon Network is accountable for its performance as an access provider, including with regard to service quality. The QCA notes that this was the intent behind QCA Act amendments which provided for an access undertaking to

[1149] Aurizon Coal, sub. 55: 1–3; Aurizon Coal, sub. 67: 1, 2 and 7.
[1150] Pacific National, sub. 61: 4,10; Pacific National, sub. 66: 3, 7.
[1151] QRC, sub. 65: 8.
[1152] Glencore, sub. 60: 1.
[1153] QRC, sub. 53: 37–39; QRC, sub. 65: 8–9, 19–23.

include information to be given to the QCA about compliance with the access undertaking and performance indicators (s. 137(2)(bc)). The prime reason for this provision was:

> to provide a mechanism to ensure that the regulated access provider does not have an incentive to reduce the level of service quality (eg. reliability of service) in response to regulation of the price (and costs) to be charged for its declared service.[1154]

The 2017 DAU and the System Rules address a range of Aurizon Network's obligations around planning and scheduling, including requirements in the NMPs for developing the STP, MTP, ITP and DTP and principles and processes governing changes to schedules. Obligations are also included in individual Access Agreements. Within this framework, the QCA considers that Aurizon Network has considerable discretion, in particular in relation to scheduling of maintenance. Aurizon Network has noted that in its day of operations engagement with stakeholders, it balances its own business interests (in terms of ensuring that rail infrastructure is safe and fit for purpose) and the interests of access seekers and holders within the confines of the access regime framework.[1155] The QCA also notes that achieving an appropriate balance in scheduling priorities is relevant in longer scheduling timeframes as well as in the day of operations environment.

The QCA also recognises that, as noted by the QRC, there is an information imbalance between Aurizon Network and access holders/customers within the scheduling environment. In particular, access holders and customers may have limited information about reasons for changes to train schedules. This information imbalance may adversely affect access holders' ability to respond in an informed manner to proposed changes to schedules as well as impair their ability to determine if Aurizon Network is in breach of its contractual obligations.

The QCA acknowledges stakeholder concerns about the potential impact of Aurizon Network's announced actions to change maintenance practices in a way that prioritises maintenance over train services. In a separate process, the QCA has assessed Aurizon Network's compliance with its obligations under UT4 in relation to this matter. The QCA concluded that Aurizon Network's actions were seemingly consistent with its UT4 obligations, noting no evidence of a sustained reduction in throughput (although the QCA was unable to ascertain whether actual volumes would have been higher but for the announced changes). However, while compliant, the QCA considered Aurizon Network's actions have resulted in some disruption and uncertainty in the supply chain.[1156]

The QCA considers that these developments highlight a significant potential for risks and uncertainty should the network manager be in position to undertake scheduling, including the scheduling of maintenance, in a way that does not seek to use reasonable endeavours to minimise disruption to train services. These risks include damaging the interests of access holders, train operators, customers and broader supply chain participants by reducing path availability (and ultimately system throughput) and creating uncertainty through changes that cause or may cause disruption to supply chain operations. This, in turn, may be detrimental to the public interest, including causing potential reputational damage to the Queensland coal industry as a reliable supplier to the coal market.

The QCA does not agree with Aurizon Network's characterisation of the QCA's draft decision on the 2017 DAU, in particular saying that the QCA has required a change in its maintenance

[1154] Queensland Competition Authority Amendment Bill 2000, Explanatory Notes, p. 4–5.
[1155] Aurizon Network, sub. 64: 23.
[1156] QCA 2018e, 3–5.

practices.[1157] The QCA did not prescribe that Aurizon Network change its maintenance programme nor the operation of its maintenance practices. The QCA did not advocate giving priority to maintenance activities rather than train services. Further, the QCA did not require Aurizon Network to pursue cost minimisation at the expense of operational flexibility by requiring that maintenance activities take priority over train services. Rather, the QCA's approach sought to promote economic efficiency, in which costs are commensurate with existing service level standards.

While it is clearly not for the QCA to decide on the maintenance practices to be adopted by Aurizon Network, it is the QCA's responsibility that Aurizon Network is compensated for efficient maintenance costs.

Appropriate amendments

Given this, the QCA considers that it is appropriate to amend Aurizon Network's 2017 DAU to strengthen its accountability in relation to network operations and scheduling. Specifically, the QCA considers it is appropriate to amend the 2017 DAU to provide that Aurizon Network must use reasonable endeavours to plan and implement operational constraints so as to minimise disruption to train services. This includes bearing the reasonable costs associated with meeting this obligation. The QCA accepts Aurizon Network's position that maintaining the network and minimising disruptions to train services is embedded in its current regulatory obligations, operational practices and current levels of interaction with stakeholders.[1158]

The aim of this amendment is to promote an appropriate balance in the interests of all parties when Aurizon Network is scheduling maintenance and train services, with a view to promoting the object of the access regime.

The effect of this drafting is that Aurizon Network must always have regard to its obligation to minimise disruption in how it maintains the network and imposes operational constraints.

The QCA acknowledges that disruption will not always be avoidable, and that circumstances outside of Aurizon Network's control may arise. The intent of this drafting is not to cause a breach event to occur for every disruption, but rather to clarify the overarching obligation on Aurizon Network to impose operational constraints while using reasonable endeavours to minimise any disruption. To further encapsulate this, clarifying wording has been inserted so that Aurizon Network will not be in breach:

- if it has provided reasonable alternative Scheduled Times for affected Train Services, or
- where the disruption is for the protection of persons or property (including Urgent or Emergency Possessions, or to comply with Safety Standards), or
- where parties have agreed to expressly limit or exclude liability for Aurizon Network under this provision.

The standard is one of 'reasonable endeavours', so a simple failure to avoid disruption will not be in breach of this requirement, provided Aurizon Network has taken reasonable measures to avoid it (acknowledging that in some circumstances it will be reasonable for Aurizon Network to take no measures, if the operational constraint is outside of Aurizon Network's control or ability to mitigate). Given this, and the potential for significant adverse impacts on access holders and

[1157] Aurizon Network, sub. 40: 4; Aurizon Network, sub. 64: 5.
[1158] Aurizon Network, sub. 64: 23–24.

the public interest of disruption to the supply chain where Aurizon Network has not acted reasonably, the QCA considers that this amendment is reasonable and appropriate.

The QCA considers that confirming and clarifying this principle in the undertaking is important in achieving a regulatory framework that appropriately balances the interests of all parties. As a result, Aurizon Network will be accountable for its actions in applying the planning and scheduling principles in the access undertaking by having clear obligations and by providing a clear means of recourse for a breach where parties are adversely affected by Aurizon Network's decisions, including customers that do not hold an access agreement. It also recognises the potential conflict of interest in situations where the access holder is a related party to Aurizon Network. In this regard, we note that enforcement action for a breach of the access undertaking under s. 158A may be brought by the QCA or another person where their interests have been adversely affected. It will also be open to individual access holders to seek recourse under the terms of their access agreements should they consider Aurizon Network has breached its obligations in the agreement in relation to scheduling.

Proposed changes to the revenue cap adjustment, to Standard Agreements and reporting linked to this obligation are addressed in Chapters 9, 14 and 20 respectively.

The QCA considers that inclusion of this obligation in the access undertaking (as well as the proposed amendments to associated Standard Agreements) will further the object of Part 5 of the QCA Act by promoting the efficient operation and utilisation of and investment in the rail infrastructure (s. 138(2)(a)). Promoting an appropriate balance in the interests of all parties in planning and scheduling outcomes, including the scheduling of maintenance, will be in the interests of access seekers, access holders and broader supply chain participants and will also be in the public interest by providing greater certainty around delivery of contractual entitlements as well as promoting efficiency of supply chains (ss. 138(2)(e), (d) and (h)).

The QCA has had regard to Aurizon Network's legitimate business interests (s. 138(2)(b)), in particular by drafting the provision as a reasonable endeavours obligation to recognise the need for some degree of flexibility in scheduling and imposing operational constraints and that a disruption may be beyond Aurizon Network's control in some circumstances. Also, the QCA has approved a revenue allowance (including maintenance allowance) that contemplates Aurizon Network acting in a way specified in the provision—that is, it is sufficient to meet Aurizon Network's reasonable costs in complying with this obligation. Further, Aurizon Network would not be in breach of this requirement provided it has taken reasonable measures to avoid disruption to train services. The QCA does not consider that Aurizon Network would (or should) be liable for disruptions caused elsewhere in the supply chain; rather it would be accountable for its own actions in terms of acting reasonably in operating the network. That is, the QCA considers that the risk of liability associated with a breach of this obligation, if any, is within the control of Aurizon Network.

In summary, having regard to the factors set out in s. 138(2) of the QCA Act, the QCA considers that the required amendments achieve an appropriate balance between the legitimate business interests of Aurizon Network, the interests of access seekers and access holders, the objects of Part 5 of the QCA Act, the public interest and other relevant factors referred to above. Whilst Aurizon Network may have concerns that the amendment(s) do not reflect its legitimate business interests, the QCA considers that s. 138(2) requires a balancing of the factors listed in that subsection.

Having regard to the above, the way in which the QCA considers it appropriate, and requires, Aurizon Network's 2017 DAU to be amended is set out in Appendix H.

18 NETWORK DEVELOPMENT AND EXPANSIONS

18.1 Aurizon Network's 2017 DAU proposal

Part 8 of the 2017 DAU establishes principles and procedures for expansions of the CQCN.

Access seekers may require an expansion of the CQCN to obtain access to the declared service. Aurizon Network's 2017 DAU provides the following funding avenues for expansions:

(1) Aurizon Network funding an expansion, either:

(a) on terms consistent with the QCA's regulatory terms, using the QCA's approved Standard Access Agreement and reference tariff methodology (including the QCA's approved WACC), or

(b) on terms that include specified access conditions, which mitigate exposure to any additional costs or risks associated with providing access that are not included in the calculation of the reference tariff

(2) users funding an expansion by means of a user funding arrangement.

The Part 8 framework outlines an expansion process that would apply to every expansion (regardless of the source of funding) and be available to all access holders, access seekers and customers of the declared service. As such, the expansion process is an investment framework that responds to the requirements of both a user funded expansion and an Aurizon Network funded expansion.

Aurizon Network's 2017 DAU proposed an expansion process based on a 'stage gate' investment process. This process incorporates a series of stages that must be satisfied prior to the construction of the expansion.

The initial stages of the expansion process produce a sequence of studies to inform the investment decision, with each study representing an incremental stage in the investigation and design of a suitable expansion to provide the relevant access rights. The studies are:

- Demand assessment—an estimation of the demand for capacity beyond that provided by the existing capacity of the network and any planned capacity resulting from any expansion(s) that Aurizon Network is contractually committed to construct.
- Concept study—a study that enables a preliminary assessment of the potential costs, benefits and risks of providing the capacity required in respect of a potential expansion.
- Pre-feasibility study—a study that identifies and assesses all technical solutions to deliver the required capacity. The study is to identify a single preferred solution for the proposed expansion.
- Feasibility study—a detailed study of the preferred solution identified in the pre-feasibility study. This includes a detailed assessment of technical and operating requirements of the proposed expansion and a detailed design of the proposed expansion.

The expansion process outlines the principles in relation to how Aurizon Network is to undertake these studies, as well as the way in which the studies are to be funded, and contains provisions enabling another party to step in and undertake the relevant studies under defined circumstances.

Following the completion of the feasibility study, Aurizon Network is to finalise the expansion parameters, grant access seekers provisional capacity allocations and finalise the source of funding for the expansion.[1159]

The construction of any expansion must be undertaken by Aurizon Network (cl. 8.2.1(l)). Following the construction of an expansion, Aurizon Network is to identify and address, in consultation with affected access holders, any shortfalls in capacity arising from an expansion.

Key issues identified during the QCA's investigation

The QCA has considered all elements of Part 8 of Aurizon Network's 2017 DAU proposal in making its decision. The following issues attracted comment from stakeholders or have been identified for further consideration during the course of our investigation:

- the process for incorporating a suite of standard user funding template agreements into the UT5 undertaking (section 18.2)
- investing in network expansions (section 18.3)
- capacity shortfall rectification obligation (section 18.4)
- the standard study funding agreement (section 18.5).

18.2 Development and review of the SUFA

Aurizon Network's proposal

The 2017 DAU included a mechanism to incorporate a SUFA into the approved UT5 undertaking.

Aurizon Network proposed to submit a proposed SUFA as part of a voluntary draft amending access undertaking three months after approval date of the UT5 undertaking (cl. 8.8.3(a)). In its 2017 DAU, if Aurizon Network does not make a submission within the applicable timeframe, the QCA may commence the process under Part 5, Division 7 of the QCA Act, in the manner contemplated by the QCA Act (cl. 8.8.3(c)).[1160]

Aurizon Network's 2017 DAU did not include a provision for the QCA to commence the process for Aurizon Network to submit a proposed SUFA if it does not agree with Aurizon Network's initial SUFA proposal.

Aurizon Network also proposed that it be required to conduct a review of the approved SUFA following:

- the execution of the first user funding agreement in the form of the SUFA, or
- 120 business days of unsuccessful negotiations over a user funding agreement.

As part of this process, Aurizon Network is required to submit:

- any amendments that it considers would improve the workability of the SUFA in the form of a draft amending access undertaking, or

[1159] The expansion process outlines how capacity is provisionally allocated to access seekers and the general principles in relation to the funding of an expansion.
[1160] Aurizon Network, sub. 1: 83.

- a submission detailing why it considers no amendments to the SUFA is required (cl. 8.8.3(d)).[1161]

The QCA is to consider any submitted draft amending access undertaking in accordance with s. 142 of the QCA Act (cl. 8.8.3(e)). If Aurizon Network does not make a submission within the applicable timeframe, the QCA may commence the process under Part 5, Division 7 of the QCA Act (cl. 8.8.3(f)).

Aurizon Network's 2017 DAU did not include a provision for the QCA to issue a written request for Aurizon Network to conduct a review of the approved SUFA within a stated time period.

QCA analysis and decision

Summary of decision 18.1

- **The QCA's decision is that Aurizon Network's 2017 DAU be amended to exclude the development and review of the SUFA (cl. 8.8.3), with amendments to Part 8 to make clear the rights of parties to refer a dispute to the QCA in a timely manner.**
- **The QCA's amendments to Aurizon Network's 2017 DAU are provided in Part 8 and Part 12 of the Amended 2017 DAU at Appendix H.**

Aurizon Network's 2017 DAU included a simplified mechanism to incorporate a SUFA that it considered more directly reflects the provisions of the QCA Act. Aurizon Network noted that the incorporation of SUFA would operate irrespective of whether or not SUFA has been formally incorporated into the 2016 Undertaking by the UT5 undertaking approval date.[1162]

The QCA's draft decision proposed amendments that incorporated a process for the development and review of a SUFA.[1163] The QCA's view was that the process provided by Aurizon Network did not provide sufficient certainty for access seekers that an appropriate SUFA will be incorporated into the 2017 DAU.

Following the release of the draft decision, Aurizon Network reassessed its position on SUFA. Aurizon Network decided that it will no longer volunteer to assume any obligation to submit a SUFA DAAU, nor include a SUFA development process in the 2017 DAU. For UT5, Aurizon Network submitted that:

- there will be no standard agreement in respect of a user funding transaction
- there will be no development process to create such a Standard Agreement
- Aurizon Network will be obliged to negotiate in good faith a user funding agreement for any expansion with access seekers who give a valid notice of their intention to negotiate
- should any dispute arise in respect of the terms of that user funding agreement, the QCA's power to determine that dispute will only be to the extent provided under Part 5, Division 5 of the QCA Act.[1164, 1165]

[1161] Aurizon Network, sub. 1: 83–84.
[1162] Aurizon Network, sub. 1: 84.
[1163] As part of the draft decision, the QCA considered that Aurizon Network's proposal that it be required to conduct a review of the approved SUFA following 120 business days of unsuccessful negotiations over a user funding agreement, appeared reasonable on the basis of submitted advice about the potential complexity of variations and the administrative time required.
[1164] See Aurizon Network, sub. 40: Appendix J for Aurizon Network's proposed access undertaking drafting.

The QCA considers that the development of a suite of various standard of agreements to form a template to underpin user funding framework is not required in the UT5 undertaking. At this time, the QCA considers that there is sufficient information available to provide for a negotiated-user funding agreement, with recourse to binding arbitration by the QCA where the parties cannot agree.

In taking this approach, the QCA's decision is that reliance on the dispute provisions at this time is a more efficient means to facilitate the negotiation of user funding for expansions of the network. Moreover, the QCA has released various decisions on previous SUFA processes that provide significant value for all stakeholders. To the extent that the QCA considers that further information is required during the term of the UT5 undertaking, it may release non-binding arbitration guidelines to assist the negotiation process.

Having said that, the QCA's view remains that a user funding option is an important part of the investment framework. A user funding option in the undertaking provides an alternative financing option to Aurizon Network's financing proposal for any applicable expansion.

At this time, the QCA considers that an appropriate and reasonable approach for supporting a user funding agreement is to:

- ensure that the 2017 DAU includes an obligation for Aurizon Network to negotiate in good faith the terms of (including non-price terms) a user funding agreement for any expansion with access seekers that give a valid notice of their intention to negotiate (cl. 8.8.1(a) of Aurizon Network's 2017 DAU)
- enable access seekers[1166] with the ability to refer a dispute, for determination by the QCA under cl. 11.1.5, should negotiations fail (cl. 8.2.2(a) of Aurizon Network's 2017 DAU)
- provide sufficient guidance for stakeholders to adequately facilitate the negotiation process towards the execution of a user funding agreement. The QCA may release non-binding arbitration guidelines, on a case-by-case basis as necessary.

An advantage of this approach is that it provides flexibility to address specific requirements of access seekers, should they differ to those outlined in any standard template. The QCA considers that this approach will provide for an appropriate balance between the legitimate business interests of Aurizon Network (s. 138(2)(b)) and the interests of access seekers (s. 138(2)(e)).

Nonetheless, the QCA will closely monitor these matters during the course of the regulatory period, with a view to considering these matters afresh if necessary in subsequent access undertaking investigations.

Aurizon Network considered that the absence of a SUFA in UT5 does not mean it is entitled to refuse to negotiate user funding arrangements. Aurizon Network would be required to comply with its existing negotiation and other regulatory obligations in a situation where a user funding agreement was required in order to obtain access to the declared service.[1167]

[1165] Aurizon Network, sub. 40: 296, 303, 305.

[1166] Aurizon Network's 2017 DAU proposes that the dispute provisions apply to an access seeker, proposed pre-feasibility funder, proposed feasibility funder (to the extent that such proposed pre-feasibility funder or proposed feasibility funder is an access seeker, customer or train operator) (as applicable)—see cl. 8.2.2(a).

[1167] Aurizon Network, sub. 40: 304.

Aurizon Network stated it is not aware of, nor has the QCA cited, any regulatory precedent for incorporating a fully-developed externally financed transaction template in the regulatory instrument of a regulated entity.[1168]

Aurizon Network outlined the significant commitment of financial resources to develop an externally financed transaction template, but noted that no approved form of SUFA that is acceptable to industry, the QCA and Aurizon Network has resulted from previous processes. Aurizon Network submitted that the benefits of conducting another round of a SUFA development process need to outweigh the costs, after taking account of the risks.[1169]

Aurizon Network said that this approach would result in user funding documentation being developed on a commercial basis to fit the specific features of each user funding transaction. Aurizon Network considered this would be consistent with the standard practice for large, complex and structured finance transactions of significant business enterprises active in the Australian marketplace.[1170]

In taking this approach, Aurizon Network considered that there is no need for the 2017 DAU to include a provision enabling the QCA to request Aurizon Network to conduct a review of the approved SUFA. Aurizon Network considered that this would replicate the power already available to the QCA under s. 139 of the QCA Act.[1171] Aurizon Network did not support its 2017 DAU being amended to establish a power for the QCA to require amendments to the approved UT5 undertaking, as it considered that this is not permitted by the QCA Act.[1172]

In response to Aurizon Network's 2017 DAU proposal, the QRC, Pacific National and Anglo American considered that the process for developing and reviewing the SUFA should be aligned with the process outlined in the 2016 Undertaking; and the outcomes of the UT4 SUFA regulatory process should be reflected in the 2017 DAU.[1173]

The QRC considered that it is essential that the QCA has robust powers to impose a SUFA suite on Aurizon Network, and these powers should be clearly stated in the access undertaking. The QRC considered that it is not in Aurizon Network's interests to have an effective SUFA suite and noted the delays in the development of SUFA as a feature of UT3 and UT4.[1174]

Pacific National supported the QCA's draft decision position if the SUFA process could be finalised quickly. Pacific National also noted that the development of the SUFA has been a protracted process. Pacific National submitted that the process to date has resulted in substantial effort from all industry participants but no concrete outcome. Consequently, Pacific National sought for the SUFA to be finalised quickly so that focus is given to issues such as efficiency improvements in the network.[1175]

The QCA acknowledges stakeholders' concerns that processes for developing a SUFA having been protracted and resource intensive. However, these processes have made substantial progress in narrowing the matters of difference, outlining the QCA's views on potential user funding agreements and highlighting the issues that require to be addressed.

[1168] Aurizon Network, sub. 40: 304.
[1169] Aurizon Network, sub. 40: 304–305.
[1170] Aurizon Network, sub. 40: 305.
[1171] Aurizon Network, sub. 1: 84.
[1172] Aurizon Network, sub. 40: 303.
[1173] QRC, sub. 20: 16, 28; Pacific National, sub. 19: 10; Anglo American, sub. 18: 21.
[1174] QRC, sub. 53: 42.
[1175] Pacific National, sub. 61: 22–23.

The QCA agrees that the benefits of conducting another SUFA development process to develop a template suite of agreements need to outweigh the costs, given the ongoing resource commitments associated with such a process, for all parties involved. Given the QCA's views on various matters has been presented in past decisions (see previous SUFA decisions), the QCA considers that there is sufficient information available to provide significant guidance for a negotiated-user funding agreement, with recourse to dispute resolution by the QCA where the parties cannot agree.

In regard to providing sufficient guidance for stakeholders, as part of the UT4 development process, Aurizon Network advised stakeholders and the QCA that it had published on its website a suite of documents referred to as a Reference User Funding Agreement. Aurizon Network stated that these templates are available for use during the good faith negotiations of a user funding agreement contemplated under cl. 8.8.1(a) of the 2016 Undertaking. While the QCA encourages Aurizon Network to publish such templates on its website to facilitate the negotiation of user funding agreements during UT5, the QCA considers that access seekers should have recourse to binding arbitration to determine these matters in the event parties acting reasonably and in good faith are unable to agree (irrespective of the reference documents published by Aurizon Network).

Anglo American considered that Aurizon Network's templates are unbalanced and inappropriate, as is evident when compared with the QCA's consideration of earlier SUFA iterations. Anglo American noted that these are completely outside the regulatory framework and can simply be withdrawn if they no longer suited Aurizon Network. Anglo American submitted that the QCA should ensure that UT5 provides obligations to resolve this issue.[1176]

The QCA does not endorse Aurizon Network's template documents. Irrespective of the templates published by Aurizon Network, the QCA has published various decisions on previous SUFA process that provide significant value for all stakeholders, as access seekers can review our positions in relation to these matters to identify the issues that they may choose to address in negotiations. As outlined above, if negotiations fail, they may refer the dispute for determination by the QCA.

Having regard to s. 138(2) of the QCA Act, the QCA considers it appropriate for the 2017 DAU to be amended to exclude any obligation for Aurizon Network to submit a SUFA DAAU or include a SUFA development process. For the reasons outlined above, the QCA considers that this appropriately balances the legitimate business interests of Aurizon Network with the interests of access seekers.

Period of unsuccessful negotiation

Aurizon Network has proposed that a period of 120 business days must elapse before parties are able to refer a dispute associated with negotiated user funding agreement to the QCA under Part 11.[1177] The QCA considers that this amendment creates an undue imposition on the rights of all parties to refer a dispute to the QCA in a timely manner and is therefore not appropriate to approve having regard to the interests of all parties (s. 138(2)(b), (e) and (h)).

The removal of a 120-business-day timeframe does not affect the rights of all parties to negotiate fully and freely for any length of time which is reasonable and/or mutually desired. It simply limits the time in which parties must be in disagreement before a resolution by reference to Part 11 can occur. The QCA notes that other 120-business-day timeframes have appeared

[1176] Anglo American, sub. 57: 12.
[1177] Aurizon Network, sub. 48: cl. 8.2.2(a)(iii).

elsewhere in Part 8, but these timeframes do not purport to limit the rights of a party to refer a dispute to the QCA.

18.3 Investing in network expansions

Aurizon Network's 2017 DAU proposal

Aurizon Network's 2017 DAU proposal is that it will, at its discretion, commit to fund all or part of an expansion consistent with the notice of its decision to the parties requesting the expansion (cl. 8.2.1(b)).

Aurizon Network's 2017 DAU does not include a provision that permits feasibility funders to adopt user funding for an expansion where Aurizon Network has given the required notice of its willingness to fund an expansion without access conditions. This establishes a clear option for Aurizon Network to fund an expansion, if other preconditions to project commitment are met and it is willing to do so on the QCA's approved regulatory terms.

Aurizon Network also proposed to issue a definitive funding notice within 40 business days after the relevant studies funding agreements become unconditional. This definitive funding notice advises relevant stakeholders as to whether Aurizon Network is willing to fund the expansion and, if so, whether it requires access conditions to do so (cl. 8.7.1(c)(ii)).

An access seeker may fund its relevant portion of the expansion if:

- Aurizon Network is unwilling to fund an expansion, or
- the access seeker does not accept Aurizon Network's access conditions.[1178]

By contrast, the 2016 Undertaking provides feasibility funders, following the provisional capacity allocation to access seekers, with the ability to fund their portion of the costs of the expansion, irrespective of Aurizon Network's willingness to fund it without access conditions.

QCA analysis and decision

Summary of decision 18.2

- **The QCA considers it appropriate to approve Aurizon Network's 2017 DAU proposal in respect of the framework for investing in network expansions, subject to including an obligation for Aurizon Network to negotiate non-price terms sought by access seekers 'in good faith'.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in cl. 8.7.1 the Amended 2017 DAU at Appendix H.**

Aurizon Network considered that if it is prepared to invest in an expansion at the regulated rate of return, it should be entitled to do so, irrespective of whether an access seeker wishes to adopt user funding. Aurizon Network considered that the user funding option should only apply where Aurizon Network is not willing to invest on regulatory terms.[1179]

[1178] Clause 8.7.1(a) of the 2017 DAU.
[1179] Aurizon Network, sub. 1: 60–62; sub. 40: 298.

Aurizon Network submitted that if it is willing to fund an expansion on regulatory terms there is no basis for the QCA to intervene, and noted that it did not volunteer to allow user funding to be adopted when it is prepared to invest on approved regulatory terms.[1180]

Aurizon Network considered that its proposal to have the first option to invest in an expansion on regulatory terms meets the object of Part 5 of the QCA Act. Aurizon Network said it is acting in accordance with the terms and conditions approved by the QCA as being appropriate and efficient, stating further that an investment on QCA approved regulatory terms must surely promote efficient investment in rail infrastructure—and it cannot be said that it is abusing its monopoly power. Aurizon Network believed that the absence of the right to invest in its own business fails to protect its right to invest in efficient expansions of its own network.[1181]

Noting that funding and construction roles are separate, Aurizon Network said that there is no basis to the claim that Aurizon Network has the potential to exert monopoly power because it might be both the entity providing funding for, and construction of, the expansion.[1182]

Furthermore, Aurizon Network considered that a restriction on its right to invest on regulatory terms is not required to facilitate access to the declared service. Therefore, Aurizon Network stated that the absence of the right to invest in an expansion on regulatory terms cannot be justified on the basis of the object of Part 5 of the QCA Act. Aurizon Network also considered that a right for it to invest on regulatory terms in its facility is within the scope of its legitimate business interests.[1183]

Aurizon Network considered that there is nothing in the QCA Act that contemplates, nor regulatory precedent in Australia to support, priority rights being given to users wishing to fund an expansion. Aurizon Network considered that it is not the purpose of the access regime under the QCA Act to divest or remove control over Aurizon Network's business or assets—such an approach has far-reaching implications for any service that the QCA regulates. Aurizon Network submitted that this would have the effect of removing Aurizon Network's rights as the owner of the CQCN infrastructure to fund and control expansions of its rail network, granting access seekers a priority right to fund any expansion and receive the business benefit from it.[1184]

The QRC did not consider that giving Aurizon Network a paramount right to invest in an expansion is the sole means by which the object of Part 5 of the QCA Act may be met. In the QRC's view, Aurizon Network should only have a first right to fund expansions if it also has a corresponding obligation to fund a meaningful category of expansions.[1185]

The QRC considered that in the absence of a funding obligation, investment in the infrastructure is best serviced by creating competition for sources of funding for expansions. The QRC submitted that promoting competition in investment in this market (that is, rail infrastructure) is both in the public interest and consistent with the object of the QCA Act. The QRC also considered that access seekers have an interest in retaining a right to invest in expansions.[1186]

[1180] Aurizon Network, sub. 40: 295–298.
[1181] Aurizon Network, sub. 1: 60; sub. 40: 298–299.
[1182] Aurizon Network, sub. 40: 299.
[1183] Aurizon Network, sub. 1: 60–61.
[1184] Aurizon Network, sub. 40: 297–299.
[1185] QRC, sub. 20: 11; sub. 53: 42.
[1186] QRC, sub. 20: 11, 27.

Pacific National considered that access seekers should have the ability to choose to fund an expansion regardless of whether or not Aurizon Network elects to fund an expansion.[1187]

QCoal, the QRC and Anglo American did not support Aurizon Network's proposed first right to invest in expansions without a corresponding obligation to fund expansions:[1188]

- QCoal considered that Aurizon Network's proposal would not develop the market for funding rail infrastructure. QCoal believed that Aurizon Network's proposal gives it a competitive advantage, by providing it with opportunities to invest that are not afforded to other investors. QCoal submitted that this will reinforce Aurizon Network's primary position as funder of rail infrastructure and that the privilege of a right to fund cannot be provided without an obligation to fund.
- The QRC considered that without a funding obligation there needs to be a competitive alternative to Aurizon Network funding. The QRC believed that Aurizon Network's proposed first right to invest will lessen the interest of potential funders for user funding. The QRC submitted that a capped funding obligation is necessary and prudent.
- Anglo American believed that Aurizon Network's ability to engage in economic hold-up to the detriment of the capacity and efficiency of the CQCN must be managed. Anglo American submitted that this is most appropriately done by requiring Aurizon Network to expand the CQCN in certain specific and controlled situations. Anglo American considered that it is fundamental to the provision of regulated access that the provider be required to invest in prudent and efficient expansions at the WACC as part of providing the declared service.

The terms and conditions for the construction of an expansion reflect the risk/reward/liability framework underpinning the construction of a project. The QCA considers that Aurizon Network's 2017 DAU does not necessarily address the extent to which non-price terms and conditions may be valued by access seekers.

In certain instances, access seekers will value certain non-price terms and conditions, including, amongst other things, those terms and conditions associated with the delivery of scope, standard and time-to-complete for the expansion. For instance, in the case of WIRP, the access provider of the CQCN was able to agree access conditions with users that included, amongst other things, additional incentives to protect customers' interests in regard to the scope and timing of the expansion.

While Aurizon Network submitted that its 2017 DAU adequately provides for access seekers to negotiate non-price terms and conditions through access conditions[1189], the QCA considers that Aurizon Network's 2017 DAU does not necessarily account for circumstances in which an alternative expansion funding option provides superior non-pricing terms and conditions (in comparison to that offered by Aurizon Network on standard regulatory terms).

The QCA's draft decision was minded to permit feasibility funders to adopt user funding for an expansion, even where Aurizon Network provides notice of its willingness to fund that expansion on regulatory terms. The QCA sought stakeholders' views as to whether the 2017 DAU adequately addresses the extent to which non-price terms and conditions may be valued by access seekers[1190], but interested parties did not provide information on this matter—aside

[1187] Pacific National, sub. 19: 10.
[1188] QCoal, sub. 16: 4; QRC, sub. 20: 27; Anglo American, sub. 18: 20–21.
[1189] Aurizon Network, sub. 40: 297.
[1190] See QCA 2017e: 411.

from supporting the incorporation of provisions into the 2017 DAU to recover damages arising from a capacity shortfall reasonably associated with an Aurizon Network default or negligent act (section 18.4).

Aurizon Network stated that the QCA has not identified any examples of how Aurizon Network might exercise monopoly power if it is both the funder and the constructor. Aurizon Network said that it is unclear how this matter would lead to more efficient investment or increased competition in relation to the funding of expansions. It considered:

- Both expansion funding options are at regulated rates of return and subject to the same regulatory access regime.
- The prudent cost of that expansion will be included in Aurizon Network's RAB with resulting access charges developed in accordance with Part 6.
- It is unclear how divesting Aurizon Network of its ability to make that investment in its business promotes efficient investment as required by the object of Part 5 of the QCA Act.[1191]

The QCA considers that Aurizon Network's 2017 DAU does not necessarily account for circumstances in which an access seeker prefers an alternative expansion funding option that provides superior non-pricing terms and conditions. Standard terms and conditions for the construction are not a feature of the regulatory framework governing expansions funded by Aurizon Network. The QCA notes that there may be good reasons for this, as it provides flexibility to address expansion specific matters as they arise. However, this may also provide Aurizon Network with the opportunity to fund an expansion, based on non-pricing terms and conditions inferior to those offered by an alternative user funding agreement.

Aurizon Network stated that access seekers are free to request Aurizon Network at any time to consider non-price terms and conditions that are of value to them, and seek to negotiate a suitable commercial arrangement in respect of those non-price terms and conditions. Additionally, Aurizon Network said it would be prepared to include in the UT5 undertaking an obligation to consider and negotiate in good faith any such proposals from the relevant access seekers.[1192]

The QCA agrees with this proposed amendment to Aurizon Network's 2017 DAU. An obligation to negotiate in good faith will promote an equitable negotiation process for non-price terms which may be sought by access seekers. The QCA considers that Aurizon Network's proposed amendment provides sufficient flexibility to negotiate non-pricing terms and conditions within the expansion framework—for all expansion funding options.

The QCA considers that, for the UT5 undertaking period, Aurizon Network's 2017 DAU, with the addition of this obligation to negotiate in good faith with access seekers on non-price terms and conditions for an expansion, will provide for an appropriate balance between the legitimate business interests of Aurizon Network (s. 138(2)(b)) and the interests of access seekers (s. 138(2)(e)), and promotes the object of Part 5 (s. 138(2)(a)).

The QCA does not accept Aurizon Network's proposition that it is not within the QCA's power to provide access seekers with priority to fund expansions. Indeed, the QCA will monitor the effectiveness of the expansion framework in facilitating the negotiation of efficient outcomes

[1191] Aurizon Network, sub. 40: 298–299.
[1192] Aurizon Network, sub. 40: 298.

(including non-pricing terms and conditions) for all parties with a view to considering these matters afresh if necessary in subsequent draft access undertaking investigations.

The QCA notes that Aurizon Network has not proposed to include a voluntary investment commitment for expansions as part of its 2017 DAU. Moving forward, if Aurizon Network proposes a voluntary investment commitment, then it would be reasonable that its legitimate business interests were afforded with the corresponding first right to fund on clear, observable and non-discriminatory terms. Only Aurizon Network has the ability to include a voluntary funding obligation as part of its access undertaking.

Separately, Aurizon Network's 2017 DAU proposed providing feasibility funders a with a definitive funding notice within 40 business days after the relevant studies funding agreements become unconditional (cl. 8.7.1(c)(ii)). The QRC did not accept the Aurizon Network's proposal; rather, it considered that this be maintained at 20 days.[1193]

In the absence of any evidence or supporting arguments, the QCA considers that Aurizon Network's proposal is not unreasonable. The QCA considers 40 days is an appropriate timeframe for Aurizon Network to respond in this instance, given the administrative processes that are likely to be required. This timeframe provides a balance between the legitimate business interests of Aurizon Network (s. 138(2)(b)) and the interests of access seekers (s. 138(2)(e)).

Scope of QCA dispute resolution powers

Aurizon Network considered that no basis exists for an access dispute in relation to the funding of the expansion if the access provider is willing to fund the expansion on approved regulatory terms. Aurizon Network submitted that it is not within the scope of an access dispute for an access seeker to dispute the right of an access provider to fund an expansion on regulatory terms merely because the access seeker feels that there is some commercial advantage to be gained by doing so.[1194]

Aurizon Network considered that the QCA Act does not confer a right on the QCA to adjudicate on who should be entitled to invest in Aurizon Network's network. Aurizon Network stated that if the QCA is unable to make an access determination overriding Aurizon Network's right to invest in an expansion that is necessary to provide access, then the QCA can have no power to require such an outcome under an approved access undertaking.[1195]

The QRC did not support Aurizon Network's interpretation of the scope of the QCA's dispute resolution powers. The QRC considered that the QCA Act does not restrict the contents of an access undertaking by reference to the prescribed restrictions on access determinations.[1196] The QRC submitted that providing access seekers with a right to fund is not inconsistent with any provision of the QCA Act.[1197]

Section 117(3) of the QCA Act states that an access determination 'may deal with any matter relating to access to the service by the access seeker, including matters that were not the basis for the access dispute notice for the access dispute'.

[1193] QRC, sub. 20, Annexure 1: 15.
[1194] Aurizon Network, sub. 1: 61.
[1195] Aurizon Network, sub. 1: 61.
[1196] QRC, sub. 20: 11.
[1197] QRC, sub. 20: 27.

The QCA's decision with respect to the scope of the QCA's dispute resolution powers is at Chapter 21.

18.4 Capacity shortfall rectification obligation

Aurizon Network's 2017 DAU proposal

Aurizon Network is to undertake an assessment of the change in capacity arising from an expansion and indicate whether there is a capacity shortfall[1198] in relation to the conditional access rights commissioned to the conditional access holder (cls. 8.9.2 and 8.9.3).

Where there is a capacity shortfall, Aurizon Network is to meet with affected access holders to discuss the available options to address that capacity shortfall (cl. 8.9.3(c)).

If Aurizon Network and affected access holders consider that an expansion is the best option to address any capacity shortfall, Aurizon Network must act reasonably and negotiate with the affected access holders the terms of a funding arrangement for that expansion (cl. 8.9.3(d)(ii)). Affected access holders are given priority allocation for the capacity associated with an expansion that addresses a capacity shortfall.

The 2017 DAU does not place an obligation on Aurizon Network to bear the cost of rectifying a capacity shortfall in regard to:

- a capacity shortfall if it was caused wholly by a default by, or negligent act or omission of, Aurizon Network
- the part of a capacity shortfall relating to the scope and standard of work proposed by Aurizon Network
- the proportion of a capacity shortfall that represents the proportion of the earlier expansion that was funded by Aurizon Network.[1199]

QCA analysis and decision

> **Summary of decision 18.3**
>
> - **The QCA's decision is to approve Aurizon Network's 2017 DAU proposal in respect of the framework for addressing capacity shortfalls resulting from an expansion.**

Appropriate allocation of risk of a capacity shortfall

Aurizon Network noted that the compression mechanism reduces the expansion access seeker's access rights if an expansion results in capacity shortfall; this allocates the risk that an expansion's scope will be inadequate to provide the contracted access rights to the expansion's access seeker.[1200]

1198 A capacity shortfall occurs where an expansion results in less capacity than is required to meet all of the access rights granted on the basis of the expansion undertaken.
1199 Aurizon Network, sub. 1: 63.
1200 Aurizon Network, sub. 1: 65.

The QRC, Anglo American, Pacific National and QCoal did not support the lack of an obligation on Aurizon Network to bear the cost of rectifying a capacity shortfall.[1201]

QCoal considered that Aurizon Network should not transfer the capacity risk to access seekers where it has control over funding, design and construction. QCoal submitted that Aurizon Network prices risks into its agreements with access seekers that it perceives are associated with the expansion, whereas access seekers have no control over these aspects and no way of assessing or mitigating this risk.[1202]

Pacific National considered that Aurizon Network should be held accountable to correct a capacity shortfall, as any shortfall should have been able to be avoided by Aurizon Network, given it has full control over the scope, cost and deliverable outcomes of any capacity expansions. Accordingly, Aurizon Network should bear the cost depending on the reason for the shortfall.[1203]

Submissions from stakeholders considered whether Aurizon Network should have an obligation to rectify a capacity shortfall in circumstances where:

- Aurizon Network has funded all or part of the expansion
- Aurizon Network's default or negligence is the cause of the capacity shortfall.

Expansions funded, entirely or partly, by Aurizon Network

The QRC considered that Aurizon Network should be required to rectify any shortfall associated with an expansion that it originally funded. The QRC noted that Aurizon Network has no compulsory obligation to fund an expansion; therefore, any election by it to fund an expansion would be made with the knowledge that it may later be required to rectify a shortfall expansion. The QRC disagreed that this imposes a funding obligation on Aurizon Network, as a shortfall expansion can only arise if Aurizon Network first voluntarily elects to fund the expansion with the knowledge that in doing so it may later be required to fund a shortfall expansion.[1204]

QCoal considered that Aurizon Network should be liable for any capacity shortfall resulting from an expansion that it funds, designs, constructs and enters into contracts with access seekers for a certain capacity resulting from that expansion.[1205]

Aurizon Network noted that in determining the scope of an expansion there is a trade-off between the expected capital cost of the expansion's scope and the certainty that this scope will deliver the required quantum of access rights. Aurizon Network considered that its role in considering such a trade-off should be in providing access seekers with options and information about the implications of these options, thereby allowing access seekers to choose a scope that best fits their needs.[1206]

Aurizon Network considered that access seekers should be given as much flexibility as possible to exercise their business judgement in determining the optimal scope and that it should not have a vested interest in advocating any option.[1207]

[1201] QRC, sub. 20: 29; Anglo American, sub. 18: 21; Pacific National, sub. 19: 11; QCoal, sub. 16: 4.
[1202] QCoal, sub. 16: 4.
[1203] Pacific National, sub. 19: 11.
[1204] QRC, sub. 20: 29.
[1205] QCoal, sub. 16: 4.
[1206] Aurizon Network, sub. 1: 64–65.
[1207] Aurizon Network, sub. 1: 65.

Aurizon Network considered that if it had an obligation to rectify a capacity shortfall, it would have a legitimate business interest (and incentive) to propose a scope that minimises the risk of a capacity shortfall upon completion of the project. Furthermore, it would discourage Aurizon Network from investing in an expansion unless the expansion's scope ensured a very high level of certainty of access availability. Aurizon Network considered that this creates perverse incentives to not provide for the most efficient expansion. As such, the inclusion of this mechanism would be contrary to the object of Part 5 of the QCA Act, and would not result in Aurizon Network's legitimate business interests being protected.[1208]

Aurizon Network also considered that a requirement for it to partially fund a shortfall expansion, corresponding to its proportion of funding, may result in outcomes and practical difficulties, given that conditional access holders may not decide to fund their part. Aurizon Network noted the inequality of such an outcome.[1209]

The QRC noted that in its experience Aurizon Network already adopts a conservative approach to scoping expansions. The QRC considered that the benefit of having certainty of contracted access rights following an expansion outweighs the risk of Aurizon Network being more conservative in scoping expansions.[1210]

The QCA agrees with Aurizon Network that access seekers should be able to exercise their business judgement in determining the optimal scope of an expansion, without Aurizon Network having a vested interest in advocating a specific scope for the expansion. Both Aurizon Network and conditional access holders should agree on the scope of the project.

Furthermore, Aurizon Network's proposed consultative approach allows different options to be considered without imposing a strict rectification obligation on Aurizon Network.[1211] Anglo American submitted that Aurizon Network should consult with affected access holders prior to undertaking any steps to deliver the shortfall to determine whether the additional cost is still to the benefit of affected access holders, for example, whether cheaper operational options can be developed.[1212] In some circumstances, for example, it may not be efficient to invest in a further expansion of the network. The QCA considers, in these circumstances, that a flexible, negotiated approach is consistent with the legitimate business interests of Aurizon Network (s. 138(2)(b)), as well as with the interests of access seekers and access holders (ss. 138(2)(e),(h)).

A flexible approach removes incentives for an overly conservative approach to expansions. The QCA considers that funding allocations for capacity shortfall rectification should remain subject to the outcomes of the negotiation process proposed in cl. 8.9.3(c).

Therefore, Aurizon Network's proposal to rectify a capacity shortfall is considered to be appropriate for an expansion funded, or partly funded, by Aurizon Network.

Aurizon Network default or negligence

In regard to a capacity shortfall following a user funded expansion, the QRC considered that a capacity shortfall rectification obligation will only materialise where the shortfall was caused by Aurizon Network's default or negligence. The QRC submitted that this is a reasonable obligation,

[1208] Aurizon Network, sub. 1: 65–66.
[1209] Aurizon Network, sub. 1: 67.
[1210] QRC, sub. 20: 30.
[1211] However, the QCA considers that Aurizon Network should be accountable for its actions where a capacity shortfall is a result of its default or negligence.
[1212] Anglo American, sub. 18: 21–22.

as Aurizon Network needs only act appropriately (and not negligently) in determining the scope of an expansion.[1213]

QCoal submitted that in any other construction project the contractor would be bound to deliver the product or service contracted—and if not delivered would either need to rectify or compensate the client.[1214]

Anglo American considered that as a minimum Aurizon Network must fund any expansion where there is a capacity shortfall and it is unable to demonstrate that it acted as a reasonably prudent provider in conducting and delivering the capacity in the expansion.[1215]

The QCA considers that Aurizon Network should be accountable for its actions where a capacity shortfall is caused by Aurizon Network's default or negligent act. This is an appropriate allocation of risk, as Aurizon Network is able to manage the risk of a default or negligent act where it is responsible for the capacity shortfall, given its responsibility as constructor for expansions. Other parties, including access holders and access seekers, are not well placed to manage this risk. As such, the QCA considers that this in the interests of access seekers (s. 138(2)(e)).

The QCA does not consider that holding Aurizon Network accountable for capacity shortfalls resulting from an Aurizon Network default or negligent act will have implications for over-scoping of an expansion. Access seekers must agree on the scope of the expansion, and Aurizon Network is only accountable if it is negligent or defaults. In any case, the scoping of an expansion remains subject to QCA approval before it is incorporated into the RAB.

Remedies for default or negligent acts

Aurizon Network considered that remedies for default or negligent acts or omissions are dealt with by the law of contract and law of negligence. Furthermore, Aurizon Network considered this removes Aurizon Network's ability to manage risks through appropriate contractual provisions negotiated with sophisticated counterparties.[1216]

Pacific National was concerned that the 2017 DAU is too flexible and is likely to allow Aurizon Network to avoid any obligation to rectify a capacity shortfall.[1217]

There are a number of ways that Aurizon Network may be held accountable for its default or negligent acts that result in a capacity shortfall, including:

- Aurizon Network's UT5 undertaking could have included a provision whereby Aurizon Network agreed to bear the reasonable cost of rectification works as reasonably required to remedy a capacity shortfall associated with an Aurizon Network default or negligent act.
- The standard construction agreement associated with an expansion could include a 'capacity obligation clause' or outline appropriate remedies for default or negligent acts or omissions.
- Aurizon Network's UT5 undertaking could include a clause that holds it accountable for damages suffered by relevant access seekers arising from a capacity shortfall to the extent reasonably attributed to an Aurizon Network default or negligent act.

[1213] QRC, sub. 20: 29.
[1214] QCoal, sub. 16: 5.
[1215] Anglo American, sub. 18: 21.
[1216] Aurizon Network, sub. 1: 66.
[1217] Pacific National, sub. 19: 10.

The QCA considers that Aurizon Network should be held accountable for capacity shortfalls resulting from an Aurizon Network default or negligent act.

The QCA's draft decision considered that Aurizon Network's 2017 DAU should include a clear process for access seekers to hold Aurizon Network accountable for capacity shortfalls resulting from an Aurizon Network default or negligent act.

The QRC and Pacific National supported Aurizon Network having to incorporate provisions that permit relevant parties to recover damages arising from a capacity shortfall reasonably associated with an Aurizon Network default or negligent act into its 2017 DAU. The QRC considered this to be a common sense clarification, submitting that it is difficult to understand why Aurizon Network should not be responsible for its own negligence.[1218]

In contrast, Aurizon Network disagreed, stating that such an obligation is not within the power vested in the QCA under the QCA Act (noting that it did not volunteer to adopt such an obligation in UT5). Aurizon Network said this would give the QCA jurisdiction to determine compensation for breach of contract and negligence, or to hear disputes under access agreements or other agreements, where the parties have not agreed to allow the QCA to perform that role.[1219]

Aurizon Network considered that such an approach is uncommercial, unreasonable and inconsistent with industry norms, submitting that it:

- exposes Aurizon Network to unlimited and ongoing liability for direct and consequential losses to any party adversely affected by the capacity shortfall (while the undertaking provisions constrain Aurizon Network from taking steps to generate more capacity to remove the capacity shortfall)
- arises independently of any agreements
- creates a material risk exposure for Aurizon Network without any compensation for bearing that exposure.[1220]

Aurizon Network said that such an obligation in an undertaking cannot be overridden or supplanted by Aurizon Network and another party under an agreement. The purported 'starting point' would constitute a tilting of the negotiation table in favour of the access seekers. Aurizon Network considered that this matter should be addressed in an agreement negotiated between the relevant parties as contemplated by the regulatory access regime. Aurizon Network noted that the QCA's UT4 SUFA decision outlined that it did not believe that the access undertaking is the appropriate mechanism to enforce this liability regime for a SUFA project.[1221]

Aurizon Network considered that such proposals would likely incentivise Aurizon Network to propose ample scope, or even more than ample scope, for an expansion in order to minimise the risk of Aurizon Network being exposed to a compensation obligation. Additionally, access seekers may be incentivised to be less concerned when entering into a user funding agreement about that agreement's inadequate scope of expansion, knowing that Aurizon Network will carry the risk of any capacity shortfall.[1222]

[1218] QRC, sub. 53: 42; Pacific National, sub. 61: 22.
[1219] Aurizon Network, sub. 40: 295, 300–301.
[1220] Aurizon Network, sub. 40: 300–302.
[1221] Aurizon Network, sub. 40: 300–301. See QCA 2017f: 31.
[1222] Aurizon Network, sub. 40: 302.

The QCA notes that Aurizon Network and relevant parties may wish to negotiate different risk allocations and incorporate wider or more limited liability provisions depending on those relevant circumstances.

The QCA considers that such a remedy, to hold Aurizon Network accountable for default or negligent acts or omissions, should be considered as part of negotiations of the funding of an expansion. For instance, the concept of a capacity shortfall resulting from an Aurizon Network default or negligent act should be reflected in the relevant construction contract or access agreement, including in the rectification/liquidated damages regime for failing to deliver the capacity.

The QCA considers that a contractual mechanism to incorporate remedies for default or negligent acts is the most appropriate way to enforce this liability regime. The QCA considers that this provides accountability for capacity shortfalls resulting from an Aurizon Network default or negligent act, which achieves an appropriate balance between the factors set out in s. 138(2) including an appropriate balance between the interests of access seekers (s. 138(2)(e)) and the legitimate business interest of Aurizon Network (s. 138(2)(b)). Importantly, this arrangement will provide flexibility for parties to negotiate an appropriate liability regime depending on the relevant circumstances.

In relation to a user funding agreement, the QCA has previously considered that the user funding agreement should specify the consequences of a failure by a party to meet its obligations. Any party entering into a contract would expect to be able to enforce obligations under that contract, or at law, in the event of a breach. This is the appropriate mechanism to enforce a contractual breach.[1223] Where such a remedy is not agreed between parties within a user funding agreement, access seekers have the ability to trigger a dispute (section 18.2).

Relevant parties are able to negotiate such terms as part of an Aurizon Network expansion, which may also entail the negotiation of access conditions in reaching a suitable commercial arrangement. The QCA considers that an obligation in the 2017 DAU to negotiate non-price terms in good faith (section 18.3 above) provides sufficient flexibility to negotiate remedies for default or negligent acts within the expansion framework. The QCA will monitor the effectiveness of the expansion framework in facilitating negotiation of such remedies with a view to considering these matters afresh if necessary in subsequent review processes. In particular, the QCA will consider whether subsequent changes are necessary to provide for explicit remedies for a capacity shortfall caused by Aurizon Network's default or negligent act.

The QCA's powers under the QCA Act

Aurizon Network considered that an obligation to rectify a capacity shortfall would be inconsistent with the QCA's powers under the QCA Act, as it creates an obligation for Aurizon Network to bear the cost of 'extending' the rail network. As such, the QCA would be acting beyond its powers if it refused to approve the 2017 DAU on the grounds that it should include an obligation to rectify a capacity shortfall. Aurizon Network submitted that at various times the QCA has conceded that it does not have the legal power to compel Aurizon Network to fund an expansion.[1224]

Alternatively, the QRC considered that s. 119(2) of the QCA Act could not have been intended to apply to projects that Aurizon Network had already agreed to fund or to negligent acts and

[1223] QCA 2017f: 29–32.
[1224] Aurizon Network, sub. 1: 63, 67; sub. 40: 301.

omissions of Aurizon Network.[1225] The QCA appreciates the points made by stakeholders on this issue.

The QCA Act provides that an undertaking may contain terms relating to extending the rail infrastructure and it is appropriate that these terms allocate risk and liability clearly so as not to discourage investment (s. 138(2)(a),(d)). This is in the interest of access seekers and access holders, and does not inappropriately impinge on Aurizon Network's interests (s. 138(2)(b),(e), and (h)).

In any case, the QCA's decision does not recommend incorporating a process within the 2017 DAU expansion framework to establish accountability for capacity shortfalls resulting from an Aurizon Network default or negligent act.

Consistent with the treatment of a capacity deficit

Aurizon Network considered that its proposal to meet and discuss with affected access holders the available options to address that capacity shortfall is similar to the way in which a capacity deficit[1226] (identified under Part 7A) is treated within the regulatory framework.[1227] Aurizon Network considered that this approach, which was implemented in the 2016 Undertaking, provides a useful precedent for dealing with a capacity shortfall.[1228]

The QRC considered that a difference in approach for expansions is appropriate, as[1229]:

- It may not be appropriate to rectify a capacity deficit that inherently exists in the system — for example, where access holders have over contracted based on an assumption that Aurizon Network would otherwise be incapable of providing the capacity required.
- It will always be appropriate for Aurizon Network to rectify the capacity shortfall for a recently commissioned expansion, as real demand for that capacity must exist for the expansion to occur.

The QRC submitted that it would be more than happy for the two positions to be aligned by creating an obligation for Aurizon Network to rectify any shortfall identified in a capacity assessment, provided that access holders support the need for investment to rectify the shortfall.[1230]

Noting that a capacity deficit, as outlined in Part 7A of the 2017 DAU, may not be due to a default or negligent act from Aurizon Network as constructor of an expansion, the QCA does not consider that the implemented approach for rectifying a capacity deficit necessarily provides a useful precedent for dealing with a capacity shortfall. The QCA considers that specific remedies are required for capacity shortfalls identified post-expansion.

Aurizon Network shortfall

Aurizon Network considered that an 'Aurizon Network shortfall',[1231] as provided in Aurizon Network's 2016 Undertaking, is an entirely hypothetical assessment, as it compares a desktop

[1225] QRC, sub. 20: 12.

[1226] A capacity deficit arises for a coal system if and to the extent that an annual capacity assessment demonstrates that the aggregate access rights for that coal system exceeds that system's capacity.

[1227] Aurizon Network, sub. 1: 69.

[1228] Aurizon Network, sub. 1: 67.

[1229] QRC, sub. 20: 30.

[1230] QRC, sub. 20: 30.

[1231] The Aurizon Network shortfall is the capacity shortfall that would have arisen if the scope and standard of work previously proposed by Aurizon Network had been constructed, as calculated by Aurizon Network.

assessment against an actual capacity shortfall. Aurizon Network also considered that any obligation to rectify an Aurizon Network shortfall effectively penalises Aurizon Network for having done nothing wrong where well-resourced and sophisticated parties do not take responsibility for the decision on the scope and standard of an expansion.[1232]

The QRC submitted a mark-up of the 2017 DAU in which the relevant provisions in the 2016 Undertaking were reinstated, including the concept of an Aurizon Network shortfall.[1233] Pacific National also supported reinstating the 2016 Undertaking provisions.[1234] Anglo American did not support the changes proposed by Aurizon Network to the 2016 Undertaking.[1235]

The intent of the 2016 Undertaking was to distinguish between any shortfall that would have arisen on the basis of the hypothetical scope preferred by Aurizon Network (Aurizon Network shortfall), and any shortfall that eventuates for the actual expansion when completed. Any Aurizon Network shortfall was deemed to be caused by a negligent act or omission by Aurizon Network.

The QCA accepts that cl. 8.9.3 of Aurizon Network's 2017 DAU provides for a simpler and more streamlined process based on consultations and negotiations between the relevant parties. The process also allows scope for potentially more cost-effective options for redressing the capacity shortfall to be identified, in consultation with affected access holders. As such, the QCA considers that Aurizon Network's proposed cl. 8.9.3 is appropriate to approve having regard to the factors in s.138(2) of the QCA Act.

18.5 Standard study funding agreement

Aurizon Network's proposal

Aurizon Network submitted a standard study funding agreement as part of its 2017 DAU to allow access seekers and funders to fund the cost of expansion studies.[1236]

QCA analysis and decision

Summary of decision 18.4

- **The QCA's decision is to approve the standard study funding agreement of Aurizon Network's 2017 DAU.**

Anglo American submitted a draft study funding agreement with suggested amendments as part of the QCA's UT4 investigation. Anglo American reiterated these suggested drafting amendments—to the extent that these proposed amendments were not adopted in Aurizon Network's 2016 Undertaking standard study funding agreement.[1237]

It is not absolutely clear in all instances what issues the amendments proposed by Anglo American are seeking to address. Specified amendments raised by Anglo American are presented in Table 93 below. Based on the information before us, the QCA considers that

[1232] Aurizon Network, sub. 1: 66.
[1233] QRC, sub. 20: Annexure 1:16.
[1234] Pacific National, sub. 19: 10–11.
[1235] Anglo American, sub. 18: 21.
[1236] See volume 3 of the 2017 DAU.
[1237] Anglo American, sub. 18: 19–20.

Aurizon Network's proposed standard study funding agreement in the 2017 DAU is appropriate to approve having regard to the s. 138(2) factors.

The QCA considers that Aurizon Network's 2017 DAU study funding agreement is reasonable and appropriately balances the factors set out in s. 138(2) including the legitimate business interests of Aurizon Network (s. 138(2)(b)) and the interests of access seekers (s. 138(2)(e)). By providing a transparent standard arrangement for funding of pre-feasibility and feasibility studies for expansions, the 2017 DAU also meets the object to promote efficient investment (s. 138(2)(a)).

Aurizon Network accepted the QCA's position on the standard study funding agreement.[1238]

[1238] Aurizon Network, sub.40: 305.

Table 93 Anglo American's proposed amendments to the 2017 DAU study funding agreement

Clause	*Proposed amendment*	*QCA response*
Clause 2.6	Inserting an additional condition—that a variation has had a material impact on the study.	This amendment makes it unnecessarily difficult for Aurizon Network to potentially vary the scope, target and estimated costs if other funding agreements are terminated.
Clause 7.1	Amendment requiring Aurizon Network to carry out the rail study in accordance with good industry practice.	This amendment is unnecessary and does not need to be expressly stated in the studies funding agreement.
Additional clause	The approval of the scope of works and target study costs.	The scope of works for the rail study is outlined in the access undertaking.
Clause 9.2	Amendment to restrict varying the scope of works without approval of the study funding committee and the process for varying the scope of works.	The scope of works may not be varied without the approval of the study funder committee.
Clause 12	The removal of the requirement for a bank guarantee.	A bank guarantee is in Aurizon Network's legitimate business interests. Aurizon Network may agree to remove the obligation to provide a bank guarantee if: (a) the study funder agrees to remedy any non-payment by any other study funder (and vice versa), or (b) Aurizon Network is permitted to cease carrying out the rail study in the event of non-payment by the study funder or any other study funder.
Clause 13.2	The right to give a dispute notice where Aurizon Network does not provide reasonable details of the calculation of the provisional project management fee.	The amendment opens up the potential for unnecessary disputes to arise regarding the calculation of the amount rather than whether the amount itself is reasonable. A study funder may give Aurizon Network a dispute notice which disputes the amount of the provisional project management fee, the project management fee and/or the adjustment amount.
Clause 18.2	The removal of the limitation on Aurizon Networks liability.	No evidence has been provided to suggest that the limitation on Aurizon Networks liability to the total amount of the project management fee in this instance is not appropriate.
Clause 19.2	The removal of the right for Aurizon Network to assign its rights under the agreement.	Proposed amendment is likely to unnecessarily restrict Aurizon Network's usual business activities.
Clause 20.2(b)	The requirement for Aurizon Network not to disclose information where it would breach its ring-fencing obligations under the access undertaking.	No evidence has been provided to suggest that conditions imposed on disclosure are not sufficient.

19 CONNECTING PRIVATE INFRASTRUCTURE

19.1 Aurizon Network’s 2017 DAU proposal

Part 9 of Aurizon Network’s 2017 DAU provides a process for the connection of private infrastructure to the CQCN. This enables third parties to construct, own and operate private infrastructure that can then be connected to the CQCN.

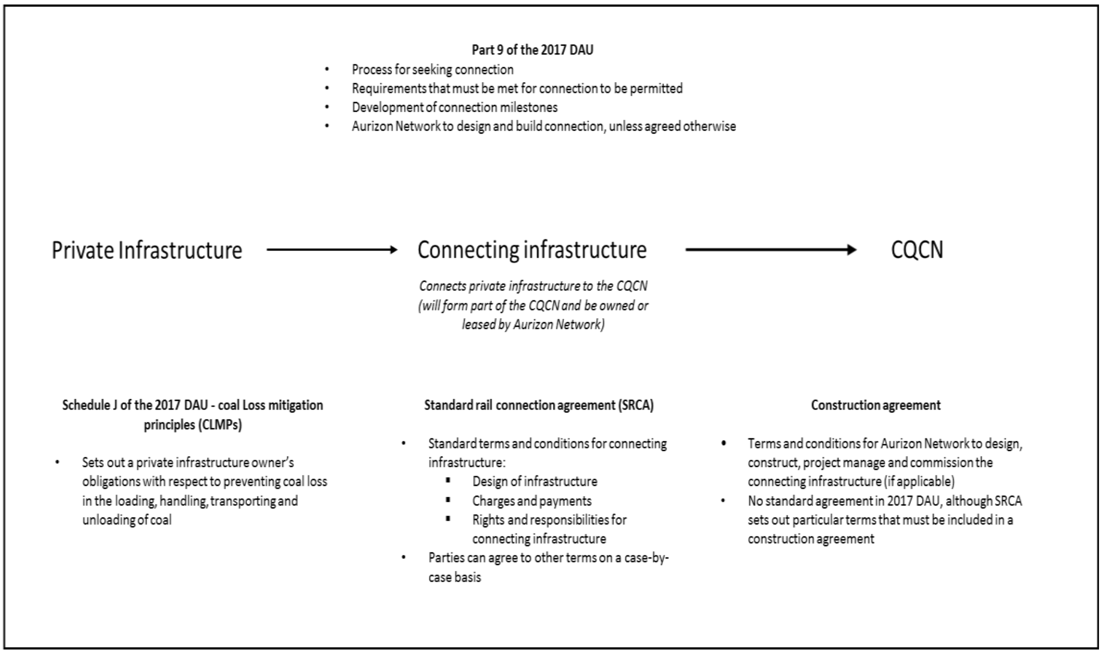
As part of these arrangements, the infrastructure that connects the private infrastructure to the CQCN (the connecting infrastructure) will be owned by Aurizon Network (or included in its infrastructure lease for the CQCN) and form part of the CQCN.

The framework consists of provisions related to the:

- requirements for connecting infrastructure, including the criteria that Aurizon Network will use to determine whether to approve proposed connecting infrastructure
- process for developing the connecting infrastructure
- application of coal loss mitigation principles to a private infrastructure owner.

Aurizon Network's 2017 DAU also includes a standard rail connection agreement (SRCA)[1239], which sets out standard terms and conditions that underpin the connection of private infrastructure to the CQCN. Figure 26 provides an overview of the 2017 DAU framework for connecting private infrastructure.

Figure 26 Aurizon Network's 2017 DAU framework for connecting private infrastructure



The framework for connecting private infrastructure proposed in Aurizon Network’s 2017 DAU is unchanged from Aurizon Network’s existing arrangements.

1239 The SRCA is included in Volume 3 of Aurizon Network’s 2017 DAU.

During the collaborative submission process, stakeholders[1240] reached consensus and proposed to amend the 2017 DAU so that the QCA's complete assessment of the terms of the SRCA will be undertaken after the assessment of the 2017 DAU is completed and the UT5 undertaking is approved. Aurizon Network has undertaken to lodge a new SRCA, after consultation with stakeholders, for assessment and approval by the QCA within 12 months of the approval of the UT5 undertaking. The process for lodgement and approval are contained in a new cl. 9.2, submitted with Aurizon Network's collaborative submission.[1241]

Key issues identified during the QCA's investigation

The QCA has considered all elements of Part 9 of Aurizon Network's 2017 DAU proposal and all submissions from Aurizon Network and other stakeholders in making this decision. The following issues attracted comment from stakeholders, or were identified for further consideration:

- the process for assessment and development of proposed connecting infrastructure, including resolving disputes about the SRCA (section 19.2)
- review and development of a new SRCA (section 19.3)
- terms and conditions of the SRCA (section 19.4)
- coal loss mitigation principles (section 19.5).

19.2 Assessment and development of proposed connecting infrastructure

Aurizon Network's proposal

Part 9 of Aurizon Network's 2017 DAU sets out a process for the assessment of proposed connecting infrastructure by Aurizon Network.

Connecting infrastructure is the rail transport infrastructure that connects private infrastructure to the CQCN and which, upon completion, forms part of the CQCN. For a particular connection, the relevant rail connection agreement can define the connecting infrastructure in detail.

A private infrastructure owner (PIO) must give Aurizon Network a written proposal for the proposed connection, which Aurizon Network will assess against specified assessment criteria (cls. 9.1(a), (b)). Connecting infrastructure must be either owned by Aurizon Network or included in its infrastructure lease for the CQCN (cl. 9.1(c)).

Aurizon Network proposed to make the assessment within two months (or a longer period as agreed with the PIO) and inform the PIO and the QCA of its decision and, if applicable, amendments it requires to the proposal to satisfy the criteria (cls. 9.1(b), (d) and (i)). If Aurizon Network is satisfied the criteria have been met, the process for the development of connecting infrastructure will commence.

[1240] Aurizon Network, sub. 26: 3, 7–8 and Appendix 1; QRC, sub. 29: 3–4 and Annexure 7, cl. 9.2; Pacific National, sub. 28: 2.

[1241] Aurizon Network, sub. 26, Appendix 1.

Development of connecting infrastructure

Aurizon Network must agree with the PIO the timeframes for the relevant connection milestones (as set out under cl. 9.1(e)).[1242] These must be agreed within two months, although the parties may agree to delay setting these milestones until the related access agreement has been entered into (cl. 9.1(f)). The agreed milestones (or the decision to delay) must be notified to the QCA (cl. 9.1(g)).

Aurizon Network must permit the connection of the private infrastructure, subject to (cl. 9.1(h)):

- a rail connection agreement being entered into (either on the terms of the SRCA or as varied by agreement between the parties)
- Aurizon Network gaining access (on acceptable terms) to the land necessary for constructing, operating, using and maintaining the connecting infrastructure
- Aurizon Network and the PIO or other relevant person entering into any other required agreements in relation to the design, construction, project management or commissioning of the connecting infrastructure or other works relating to the proposed connection.

If a rail connection is permitted, then, unless otherwise agreed with the PIO, Aurizon Network:

- must be responsible for designing, constructing, project managing and commissioning the connecting infrastructure
- must do so in accordance with the relevant rail connection agreement, construction agreement and any other relevant agreement without unreasonable delay
- is entitled to payment for that design, construction, project management and commissioning consisting only of its efficient costs which directly relate to the connecting infrastructure, but only to the extent that such costs have not been, or will not be, included in the regulatory asset base or recovered by Aurizon Network through other means under the undertaking
- must not, in the technical specifications required by Aurizon Network for connection to the rail infrastructure, require higher standards for the design or construction than those required under the relevant legislation and safety standards (cl. 9.1(k)).

Aurizon Network's 2017 DAU also includes provisions to address any unreasonable delays by Aurizon Network associated with the connecting infrastructure. Aurizon Network must pay all reasonable costs (excluding consequential loss) incurred by the PIO arising directly out of Aurizon Network's unreasonable delay in:

- entering into a rail connection agreement or any necessary agreement relating to the design and construction, project management and/or commission of any connecting infrastructure or any other works required for the connection
- designing, constructing and commissioning any connecting infrastructure
- completing any other matters that Aurizon Network and the PIO consider necessary (cl. 9.1(l)).

[1242] These are the timeframes within which Aurizon Network will (a) enter into a rail connection agreement with the PIO; (b) design and construct any connecting infrastructure; (c) commission any connecting infrastructure; and (d) complete any other matters Aurizon Network and the PIO consider necessary.

Unreasonable delay includes a failure to comply with a connection milestone (unless that failure is a direct result of an event or factor outside Aurizon Network's reasonable control) (cl. 9.1(m)).

QCA analysis and decision

Summary of decision 19.1

- **The QCA's decision is to approve Aurizon Network's 2017 DAU proposal in respect of the process for assessment and development of connecting infrastructure, subject to amendments to:**
  - **(a) clarify that any proposed variation to the terms of the standard rail connection agreement (not including the completion of schedules) that cannot be agreed is resolved by the parties entering into the standard rail connection agreement**
  - **(b) reflect the process for the development of a revised standard rail connection agreement.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in cl. 9.1 of the Amended 2017 DAU at Appendix H.**

Stakeholders did not object to Aurizon Network's cl. 9.1.

The QCA's decision is that it is appropriate to approve cl. 9.1 of the 2017 DAU in respect of the process for assessment and development of connecting infrastructure, subject to amendments to clarify disputes about the terms of the SRCA (as well as consequential amendments arising from Aurizon Network's proposal for the development of a revised standard rail connection agreement during the UT5 undertaking period – see section 19.3).

It is in the interests of all parties that connecting infrastructure is developed in a timely and efficient manner, provided it meets the relevant safety and operating standards, and does not adversely affect the CQCN. Assessments of proposed connecting infrastructure should be made in a clear and transparent manner so that a PIO has certainty about what is required for proposed connecting infrastructure.

It is reasonable for Aurizon Network to assess the proposed connecting infrastructure against the criteria outlined in cl. 9.1(b). Aurizon Network's obligations regarding an assessment under this clause are appropriate and promote timeliness and transparency in the assessment of proposed connecting infrastructure.

Once proposed connecting infrastructure has been assessed as meeting the criteria, the development of the infrastructure should not be unreasonably delayed. Parties should have certainty of the timeframe within which connecting infrastructure will be developed. To that effect, the 2017 DAU includes obligations on Aurizon Network and the PIO to agree the timeframes in which the connection milestones will be completed (cl. 9.1(e)). The 2017 DAU also includes provisions for Aurizon Network to pay the reasonable costs incurred by a PIO (excluding consequential loss) arising out of a failure to meet particular milestones (cl. 9.1(l)). To the extent these will provide an incentive for connections not to be unreasonably delayed (other than for reasons outside Aurizon Network's control), it is appropriate to approve these arrangements.

It is further in the interests of all parties that the framework for the finalisation of the necessary agreements is clear and effective (cl. 9.1(h)). The necessary agreements outlined in that clause will include the SRCA until such time as the new SRCA is approved under the proposed new cl. 9.2, replacing the SRCA.

Finally, it is appropriate that Aurizon Network recovers its efficient costs for developing the connecting infrastructure (designing, constructing, project managing, etc.), given that the proposed drafting excludes costs that are otherwise recovered through the UT5 undertaking.

The QCA considers that cl. 9.1, amended as required, appropriately balances the factors set out in s. 138(2) including the legitimate business interests of Aurizon Network (s. 138(2)(b)) and the interests of access seekers and the public (ss. 138(2)(d) and (e)). It also advances the object of Part 5 of the QCA Act (s. 138(2)(a)) by providing a timely, efficient and transparent process.

Referral of disputes about SRCA terms

The QCA considers that all parties' interests are served by the inclusion of amendments to Aurizon Network's 2017 DAU that make it clear that if negotiations to vary the terms of the SRCA falter, then any dispute in relation to the terms will be resolved by the parties entering into the standard agreement. However, disputes over the completion of schedules will be resolved under the Part 11 dispute resolution processes. This is reflected in amendments the QCA requires to be made (see cl. 9.1(h)(i) of the Amended 2017 DAU set out in Appendix H).

Aurizon Network indicated support for this approach.[1243] However, it also commented that by 'limiting the ability to dispute variations to the standard terms of the Standard Rail Connection Agreement, there is the potential for flexibility in terms of design, operation and management of the connection to be reduced.' Aurizon Network said the nature of each private infrastructure connection means that there are no standard connections and that, without the ability to dispute a proposed provision of the agreement through Part 11, it may be 'more inclined' to revert to standardised connection designs. It noted it will seek to address the issue of flexibility within the development of the revised SRCA.[1244]

However, the QCA considers the approach taken in the Amended 2017 DAU in Appendix H is appropriate. By creating a structure for the resolution of disputes involving the completion of schedules to an SRCA, and by resolving disputes as to terms of the SRCA (or new SRCA) by entering into those agreements, the QCA considers that this decision appropriately balances Aurizon Network's legitimate business interests (s. 138(2)(b)) and the interests of access seekers (s. 138(2)(e)) by providing a clear, consistent and efficient method for resolving disputes. The QCA also considers this approach consistent with the object of Part 5 of the QCA Act (s. 138(2)(a)).

19.3 Review and development of a revised SRCA

Aurizon Network's collaborative submission proposal

Following the collaborative submission process, Aurizon Network proposed that the 2017 DAU be amended to include a review and development mechanism for a new SRCA during the UT5 undertaking period.[1245]

Aurizon Network's new cl. 9.2 proposes that Aurizon Network be required to submit to the QCA, after stakeholder consultation, a new SRCA within 12 months of the approval date of the 2017

[1243] Aurizon Network, sub. 40: 308. The QCA acknowledges that its draft decision described the inclusion of a 'new cl. 9.3' in error. This reference should have been to the proposed drafting in cl. 9.1(h)(i).
[1244] Aurizon Network, sub. 40: 308–309.
[1245] Aurizon Network, sub. 26, Appendix 1.

DAU.[1246] The QCA will then assess the appropriateness of the new SRCA after having regard to, amongst other things, the factors listed in s. 138(2) of the QCA Act.

Importantly, Aurizon Network has included provisions that allow the QCA to prepare a new SRCA in the event that:

- Aurizon Network does not submit a proposed SRCA within the 12-month timeframe
- Aurizon Network does not resubmit a proposed SRCA which the QCA has refused to approve (with reasons)
- the QCA refuses to approve a proposed SRCA that was resubmitted in accordance with the relevant provisions.[1247]

QCA analysis and decision

Summary of decision 19.2

- **The QCA's decision is that Aurizon Network's 2017 DAU should be amended to include a process for the development of a new standard rail connection agreement during the UT5 undertaking period, and to include new consequential drafting to clarify how the new standard rail connection agreement will apply.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in the Amended 2017 DAU at Appendix H.**

Submissions from Aurizon Network[1248], the QRC[1249] and Pacific National[1250] supported the amendment of the 2017 DAU to include a process for the development of a new SRCA within 12 months of the approval of the 2017 DAU. Aurizon Network and the QRC reached consensus on drafting for this process.[1251]

The QCA agrees with Aurizon Network and stakeholders that the 2017 DAU should, in order to facilitate a new SRCA, include a mechanism for Aurizon Network to submit a proposed revised SRCA within 12 months of the approval date of the 2017 DAU. It is appropriate that, if Aurizon Networks fails to submit a revised SRCA, the QCA can prepare and approve its own (subject to having regard to stakeholder submissions on the proposed SRCA). While it is accepted that the current SRCA should be revised, the QCA is cognisant of the additional time and effort that would be required to undertake this process in parallel with the rest of the 2017 DAU.

Therefore, the QCA agrees that the amendment, review and approval of a new SRCA should be undertaken via a process that is separate from the process to consider the 2017 DAU. To this end, the QCA considers it is appropriate to approve the new cl. 9.2 proposed by Aurizon Network and the QRC, but to include amendments to correct a drafting anomaly, so that the clause clearly distinguishes between the SRCA and the revised SRCA, and to delete cl. 9.2(j) proposed in the stakeholder consensus drafting, which duplicated the effect of cl. 9.1(h)(i).

[1246] Aurizon Network, sub. 26, Appendix 1, cl. 9.2(a).
[1247] Aurizon Network, sub. 26, Appendix 1, cl. 9.2(d).
[1248] Aurizon Network, sub. 26: 3, 7–8 and Appendix 1.
[1249] QRC, sub. 20: 37–39; sub. 29: 3–4 — While the QRC initially proposed changes to the SRCA, it subsequently revised its position to support Aurizon Network's proposed process for the development of a new SRCA during the term of the UT5 undertaking period.
[1250] Pacific National, sub. 28: 2.
[1251] Aurizon Network, sub. 26: 7–8 and Appendix 1; QRC, sub. 29: 3–4 and Annexure 7.

The QCA's deletion of the proposed cl. 9.2(j) and the related amendments to cl. 9.1(h)(i) make it clear that the revised SRCA (once approved) becomes the SRCA within the overall process of cl. 9.1 (that is, making clear that there will only be a single approved SRCA). Aurizon Network supported these amendments.[1252]

The QCA considers this decision appropriately balances the factors set out in s. 138(2), including Aurizon Network's legitimate business interests (s. 138(2)(b)) and the interests of access seekers (s. 138(2)(e)) by providing additional time for stakeholders to consider a new SRCA through a separate consultative process. We also consider that because the new SRCA will be considered separately from the 2017 DAU, it will also result in efficiencies in the regulatory process, which is in the public interest (s. 138(2)(d)) and which advance the object of the regime (s. 138(2)(a)).

19.4 Standard rail connection agreement

Aurizon Network's proposal

The PIO and Aurizon Network must enter into a rail connection agreement in order for connecting infrastructure to be permitted. This agreement underpins the connection of private infrastructure, including setting out each party's rights and obligations for the initial development of connecting infrastructure and its ongoing operation.

Aurizon Network's 2017 DAU includes a SRCA, which contains standard terms and conditions in relation to the connection of private infrastructure. While parties may agree variations to these terms, the SRCA provides a standard template agreement to facilitate a timely process for connecting private infrastructure.

Broadly, the SRCA includes provisions with respect to:

- charges payable by the PIO to Aurizon Network under the agreement
- the design and construction of the connecting infrastructure, for which Aurizon Network is responsible unless the PIO agrees otherwise
- each party's rights and obligations in relation to the connecting infrastructure post-commissioning, such as the ongoing maintenance of the infrastructure
- obligations for the PIO with respect to the ongoing maintenance of, and any modifications or upgrades to, the private infrastructure, as well as requirements for the operation of train services that will ultimately operate on the network
- operational matters, including safety and interface, and train control requirements.

If Aurizon Network is responsible for designing and constructing the connecting infrastructure, a construction agreement between Aurizon Network and the PIO will be required. The 2017 DAU does not contain a standard construction agreement, although the SRCA does specify particular terms that must be included in any construction agreement developed by the parties (cl. 7(b)(viii) of the SRCA).

[1252] Aurizon Network, sub. 40: 308.

QCA analysis and decision

Summary of decision 19.3

- **The QCA's decision is to approve the SRCA included as part of Aurizon Network's 2017 DAU, subject to amendments to correct references to applicable legislation and organisations.**
- **The QCA's required amendments to the proposed SRCA in Aurizon Network's 2017 DAU are provided in the Amended 2017 DAU SRCA at Appendix H.**

The QRC initially proposed a number of changes to the SRCA, which it considered would 'simplify the drafting without seeking to make any material changes to the risk allocation between Aurizon Network and the Private Infrastructure Owner'.[1253] It said that these should be adopted 'to increase the efficiency of negotiating and administering the RCA'.[1254] Subsequently, the QRC withdrew its proposed amendments to the SRCA on the basis that a process is included in the 2017 DAU for the review of the SRCA during the term of the UT5 undertaking period.[1255]

The QCA's decision is that it is appropriate to approve the 2017 DAU in respect of the SRCA, subject to amendments to correct references to applicable legislation and organisations. The SRCA that is included as part of the 2017 DAU is unchanged from the SRCA included as part of the 2016 Undertaking. Nonetheless, the QCA has considered the SRCA afresh, consistent with the requirements of the QCA Act, and has identified the need for amendment.

Under Aurizon Network's SRCA, Senior Site Executive is defined as 'the senior site executive appointed in accordance with the *Mineral Resources Act 1989* (Qld)' (cl. 1 of the 2017 DAU SRCA). The QCA considers that it is not appropriate to approve the term as defined in the SRCA. As clarified by Aurizon Network,[1256] the term does not appear in the *Mineral Resources Act 1989*; rather, it appears, and is defined as, a Site Senior Executive in s. 25 of the *Coal Mining Safety and Health Act 1999*. The QCA considers this term should be amended to ensure it reflects the applicable legislation (see Amended 2017 DAU SRCA at Appendix H).

The QCA also considers the reference to the 'Institute of Chartered Accountants in Australia' used in the SRCA is not current and should be amended to 'Chartered Accountants Australia and New Zealand'.

The QCA does not accept Aurizon Network's proposed amendments to the SRCA, as they relate to the references to the new *Rail Safety National Law (Queensland) Act 2017* (the Queensland Act) and the consequential amendments to definitions and provisions flowing from this change.[1257] The QCA notes that the Queensland Act (having repealed and replaced the *Transport (Rail Safety) Act 2010* (Qld)) adopts the Rail Safety National Law, which itself is set out in Schedule 1 of the *Rail Safety National Law (South Australia) Act 2012* (SA). It appears to the QCA that, in almost all instances, where the SRCA refers to the RSNL, it is referring to the Rail Safety National Law as adopted in Queensland by the 2017 Act. The QCA notes that clause references proposed by Aurizon Network do not align with the Queensland Act, but do align with the Rail Safety National Law. The QCA has made amendments to the SRCA to ensure the Rail Safety National Law is correctly referenced.

[1253] QRC, sub. 20: 37.
[1254] QRC, sub. 20: 39.
[1255] QRC, sub. 29: 4.
[1256] Aurizon Network, Responses to QCA requests for information, 29 May 2017, 29 June 2018 and 13 July 2018.
[1257] Aurizon Network, sub. 51.

Other than the above, the QCA considers it appropriate to approve the SRCA as submitted by Aurizon Network. However, the QCA's approval of the SRCA is predicated on the requirement to include provisions as outlined in section 19.3. These will ensure efficiency in the review and amendment of the SRCA, either by Aurizon Network or the QCA, during the UT5 undertaking period.

The QCA is required by the QCA Act to consider the 2017 DAU submitted by Aurizon Network and either approve, or refuse to approve, that DAU. In coming to that decision, the QCA must have regard to all of the relevant factors under s. 138(2) of the QCA Act, which includes 'any other issues the authority considers relevant' (s. 138(2)(h)). Insofar as our decision relates to the terms of the proposed SRCA, it is relevant that stakeholders have reached a consensus position for a review of the SRCA during the term of the UT5 undertaking, and a mechanism in the UT5 undertaking to ensure that the review takes place. Proceeding to approve the SRCA on the basis that there is a mechanism mandating a future revision of the SRCA is also in the interests of Aurizon Network and access seekers (as discussed in section 19.3), who have requested that they be given time, outside of the 2017 DAU process, to concentrate on the terms of the SRCA.

Given the mandatory nature of the required cl. 9.2 process and stakeholder consensus on the proposed course of action, the QCA considers it appropriate to approve the SRCA submitted with the 2017 DAU and then consider, approve or prepare (as the case may be), the proposed new SRCA to be submitted under cl. 9.2.

19.5 Coal loss mitigation principles

Aurizon Network's proposal

Schedule J of Aurizon Network's 2017 DAU contains the coal loss mitigation provisions (CLMPs). These set out a PIO's responsibilities to prevent coal loss during the handling, loading and transport of coal. They are focused on meeting the standards, targets and levels for preventing coal loss in accordance with all applicable laws and requirements or directions issued by responsible environmental authorities (cl. 1.3 of Schedule J).

In particular, Schedule J of the 2017 DAU includes:

- a general obligation for a PIO to use reasonable endeavours to prevent coal loss, taking into account limiting factors, including the prevailing business conditions at the time and the effectiveness of the particular mitigation approach, given technology and cost constraints (cl. 1.4(a)). Further compliance obligations apply to a PIO during the handling, loading and unloading of coal using transfer facilities (cl. 1.4(c))
- specific obligations for the PIO's particular operations and practices associated with coal loading, profiling and veneering (cls. 1.5 and 2)
- a PIO's reporting requirements and Aurizon Network's rights to monitor a PIO's compliance with its CLMP obligations, including a process for non-compliance to be rectified or otherwise dealt with (cls. 1.6–1.8)
- a process for continuous improvement of practices for preventing coal loss. This requires parties to periodically meet to discuss the effectiveness of current practices, and new or modified practices that could be used to improve the prevention of coal loss (cl. 1.9).

The SRCA includes an obligation on a PIO to ensure that trains transporting coal that enter the CQCN comply with the CLMPs (cl. 9 of the SRCA). The general characteristics of a reference train service also include using measures to minimise coal spillage and leakage, and coal dust emissions en route that are consistent with the CLMPs (cl. 1.3(b)(vii) of Schedule F).

QCA analysis and decision

Summary of decision 19.4

- **The QCA's decision is to approve Aurizon Network's proposed 2017 DAU coal loss mitigation principles in Schedule J of the 2017 DAU.**

Stakeholders did not raise issues with Schedule J of Aurizon Network's 2017 DAU.

Having regard to the s. 138(2) factors, the QCA considers the arrangements for the CLMPs are appropriate, including providing an appropriate balance between the legitimate business interests of Aurizon Network (s. 138(2)(b)) and the interests of PIOs (s. 138(2)(h)). In particular, these arrangements set out a broad range of obligations on the PIO and include various reporting requirements and monitoring rights for Aurizon Network, including processes to rectify non-compliance. These arrangements also include processes for facilitating the continuous improvement of practices for preventing coal loss.

20 REPORTING, COMPLIANCE AND AUDITS

20.1 Aurizon Network's 2017 DAU proposal

Part 10 of Aurizon Network's 2017 DAU sets out the proposed framework for information reporting and demonstrating compliance with the undertaking including auditing requirements. These arrangements include:

- annual and quarterly reporting on network performance and maintenance costs (cl. 10.3)
- reporting on the roll-forward of the regulated asset base (RAB), condition-based assessments, and financial statements (cl. 10.4)
- provisions to demonstrate Aurizon Network's compliance with the undertaking (cl. 10.5)
- procedures and requirements for auditing of reports (cl. 10.6)
- provision of information to the QCA, processes for correcting reporting errors and the certification of reports by Aurizon Network (cl. 10.7).

Under cl. 10.2, Aurizon Network proposed that, unless otherwise required by the undertaking or agreed between Aurizon Network and the QCA, any information to be reported under Part 10 will be reported separately for each:

- coal system
- reference tariff (where applicable)
- user funded expansion (in respect of the condition-based assessments required by cl. 10.4.3).

Aurizon Network's proposed Part 10 provisions are broadly consistent with its existing reporting arrangements.

20.1.1 Network performance reporting

Aurizon Network proposed to prepare the following reports on its network performance and maintenance:

- annual maintenance plans (cl. 10.3.1)
- quarterly and annual maintenance cost reports (cls. 10.3.2–3)
- quarterly network performance reports (cl. 10.3.4).

These proposed reporting requirements are discussed further below.

Maintenance reporting

Aurizon Network's proposed annual maintenance plans (cl. 10.3.1) will document the planned scope of maintenance and renewals for the forthcoming year, and include details of maintenance costs for the previous year. These reports will be prepared and presented to Aurizon Network's access holders and customers.

Under cl. 10.3.2, Aurizon Network proposed to prepare and submit quarterly maintenance cost reports to the QCA, with the format and content of these reports being subject to QCA approval. Once the QCA has approved the reports, Aurizon Network will publish them on its website.

In contrast to Aurizon Network's 2016 Undertaking, which requires a process for Aurizon Network to develop a draft quarterly maintenance report and seek the QCA's approval[1258], the 2017 DAU proposed to remove this requirement for the UT5 undertaking if the QCA has already approved the report format under the 2016 Undertaking.

Aurizon Network's annual maintenance cost reports (cl. 10.3.3) will be published within four months of the end of each year and will contain detailed information on a range of parameters, including:

- actual maintenance costs compared with the forecast maintenance costs accepted by the QCA (disaggregated by type of maintenance activity)
- the actual scope of maintenance work performed, compared with the forecast scope accepted by the QCA
- an explanation of any significant variations between the forecast and actual scope and cost of maintenance undertaken
- the actual maintenance cost index (MCI) compared with the forecast MCI accepted by the QCA, and the impact of any difference on Aurizon Network's maintenance costs
- annual below-rail transit times, overall track condition index (OTCI) results and major reportable safety incidents
- the number of derailments, including actions taken to restore the rail network and any impacts on planned maintenance work
- details of all capital expenditure related to asset renewals that was incurred in place of planned maintenance work.

Network performance reporting

Under cl. 10.3.4, Aurizon Network proposed to publish a quarterly report on its network performance. This report will present information on the following performance measures:

- the number of train services that operated in the quarter, service reliability (measured by the percentage of services that reached their destination on time) and the reasons for any services failing to reach their destination on time
- average transit times and delays, measured in minutes per 100 train kilometres
- the availability of the network for train services, including the number and percentage of train services cancelled and the party responsible for those cancellations
- safety of train services, including the number of major incidents reported to the safety regulator
- network service quality, including information on speed restrictions, and track quality (measured by a quality index)
- distances travelled and tonnage hauled on coal-carrying train services (measured in gtk, nt, ntk and egtk); average below-rail transit times; and the number of train paths available, contracted and used
- the number of train paths that were scheduled, the number of train paths used for planned and unplanned maintenance, and the percentage of train paths available but not used

[1258] Refer to cl. 10.3.2 of Aurizon Network's 2016 Undertaking.

- instances of contested train paths and the outcomes of these matters.

Aurizon Network also proposed to publish a report comparing network performance in the relevant reporting quarter with performance in the previous quarter and the corresponding quarter of the preceding year (cl. 10.3.4(k)).

In addition to the report published under cl. 10.3.4(a), Aurizon Network will also provide the QCA with a confidential report presenting the same information disaggregated for each railway operator (cl. 10.3.4(l)).

20.1.2 Other reporting

Under cl. 10.4, Aurizon Network proposed to prepare and publish the following additional reports:

- an annual financial report (cl. 10.4.1)—within six months of the end of each year, Aurizon Network will publish on its website its certified financial statements, prepared in accordance with cl. 3.7 of Part 3 of the 2017 DAU (see Chapter 12)
- a public annual RAB roll-forward report (cl. 10.4.2)—Aurizon Network will publish a report outlining any changes to the RAB for the relevant year, including information on the opening RAB value, indexation, depreciation, capital expenditure, disposals and transfers, the closing RAB value and the capital indicator for the relevant year
- a condition-based assessment of rail infrastructure (cl. 10.4.3)—before the end of the term of the undertaking period, Aurizon Network will appoint an independent assessor, approved by the QCA, to conduct this assessment. The assessor will produce a report on the findings of its assessment, identifying the extent to which the rail infrastructure has deteriorated by more than would be expected if prudent operating, maintenance and asset replacement practices were observed. Aurizon Network will publish the assessor's report on its website.

Clause 10.4 of Aurizon Network's 2017 DAU also proposed:

- updated timing for procuring a condition-based assessment of its rail infrastructure (cl. 10.4.3(a))
- clarification of the distinction between confidentiality obligations regarding condition-based assessments for agreements entered into before and after commencement of the 2016 Undertaking, and consequential corrections to cross-references (cl. 10.4.3(j)(ii)).

20.1.3 Compliance with the undertaking

Clause 10.5 sets out Aurizon Network's proposed approaches to demonstrating compliance with the undertaking. These provisions are discussed in the following sections.

Compliance officer

Under cl. 10.5.1, Aurizon Network proposed to appoint a compliance officer with responsibility for managing the systems and practices required to ensure Aurizon Network complies with its undertaking obligations. The compliance officer will also be responsible for notifying Aurizon Network's Executive Officer of any material breaches of the undertaking and any remedial action taken to address these breaches.

Annual compliance reporting

Aurizon Network proposed to publish an annual report on its compliance with the UT5 undertaking (cl. 10.5.2). The information to be reported is set out in detail in cl. 10.5.2(c)–(e). In summary, the annual compliance report will contain information about:

- access applications and proposals received
- requests for capacity information received
- timeliness of acknowledging and processing requests and applications
- the number of disputes and complaints received
- use of confidential information by Aurizon Network personnel
- the length of negotiation periods
- the number of capacity transfer requests received and effected.

The annual compliance report will also be accompanied by an audit assurance report that meets the requirements of cl. 10.6.

In addition to publishing the annual compliance report on its website, Aurizon Network must provide the QCA with a supplementary report presenting the same information, but reported separately for its third party access holders (in aggregate) and related party access holders, also in aggregate (cl. 10.5.2 (a)).

Reporting of breaches

Under cl.10.5.3, Aurizon Network will notify the QCA of any breaches of the undertaking that it is aware of, including remedial action taken to address the breaches. When a breach directly and adversely affects the interests of a customer, Aurizon Network will also provide the affected customer with the information reported to the QCA (cl. 10.5.3(b)).

Aurizon Network proposed to maintain an issues register documenting any known, or alleged, breaches of the undertaking that have occurred since its commencement (cl. 10.5.3(c)). The issues register will also document any written complaints by customers regarding Aurizon Network's performance of its undertaking obligations, and the steps that Aurizon Network has taken to address the matters recorded on the issues register. The issues register, and any information or documents referred to in it, will be made available to the QCA or auditors if requested (cl. 10.5.3(d)).

20.1.4 Audit requirements

Clause 10.6 sets out Aurizon Network's proposed arrangements for auditing of the reports required under the undertaking. Aurizon Network proposed to procure audits of its compliance with the Part 10 reporting obligations and Part 3 ring-fencing obligations, annually or as otherwise requested by the QCA.

Under cl. 10.6.3, the QCA may also ask Aurizon Network to procure an audit of any specific conduct or decisions made by Aurizon Network, and whether these comply with the undertaking. To the extent approved by the QCA, Aurizon Network proposed to recover the costs of audits requested under cl. 10.6.3 through adjusted annual revenue allowances.

For all audits under Part 10, the auditor will compile a report identifying whether Aurizon Network has complied with the relevant obligations, including details of any non-compliance, and an explanation of how the audit was conducted.

The audit provisions of Part 10 also have a bearing on Aurizon Network's obligations under Part 3. Specifically, under cl. 3.7.3, Aurizon Network will also procure an audit of its annual financial statements in accordance with cl. 10.6.4. The intent of this audit is to determine whether the financial statements have been developed in accordance with the requirements of the costing manual (see Chapter 12), and the approved undertaking. Under cl. 3.14(f), the QCA may also request an audit of the Aurizon Network's confidential information register. The proposed confidential information register is discussed in more detail in Chapter 12.

Clause 10.6.4 sets out matters of detail regarding the auditing process, including:

- criteria for selecting auditors and the auditors' responsibilities
- planning and consultation regarding the scope and execution of audits
- provision of information required to perform audits
- reporting and implementation of any auditor recommendations.

Further details on these proposed audit processes appear in cl. 10.6.4 of the 2017 DAU.

20.1.5 General provisions

Clause 10.7 includes miscellaneous proposed provisions relating to reporting and compliance with the undertaking. In summary, these provisions establish:

- a requirement for Aurizon Network to provide copies of access agreements to the QCA (when requested) to demonstrate Aurizon Network's compliance with the undertaking, and other information required by the QCA to perform its functions associated with the undertaking (cl. 10.7.1)
- conditions surrounding public disclosure of access agreements (cl. 10.7.1)
- processes for correcting any errors detected in reports (cl. 10.7.2)
- assumptions regarding the certification of reports by Aurizon Network's Executive Officer (cl. 10.7.3).

20.2 QCA analysis and decision

Summary of decision 20.1

- **The QCA considers it appropriate to approve Aurizon Network's 2017 DAU proposal in respect to Part 10, subject to the QCA's required amendments to Part 10 to reflect reporting requirements to assist the QCA and affected parties to identify reasons for disruption to train services and the steps taken by Aurizon Network to minimise the disruption to those train services.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in cl. 10.3.5 of the Amended DAU at Appendix H.**

A reporting, compliance and audit regime (referred to as the reporting regime) that is effective underpins the integrity of the access regime and provides transparency and accountability regarding Aurizon Network's below-rail operations. An effective reporting regime is necessary in order to promote the economically efficient operation of, use of and investment in significant infrastructure (s. 138(2)(a)), the public interest (s. 138(2)(d)), and in the interest of access seekers (s. 138(e)) and access holders (s. 138(2)(h)).

The QCA considers it appropriate to approve Aurizon Network's Part 10 proposal, subject to amendments that provide for additional reporting to assist the QCA and affected parties to identify reasons for disruption to train services. The QCA considers that, with amendment, the reporting requirements will provide sufficient information about Aurizon Network's operations to allow access seekers, access holders and end users to make informed decisions and have confidence in the regulatory regime. They also provide sufficient transparency and oversight of network performance and Aurizon Network's compliance with the undertaking, along with Aurizon Network's commitment to non-discriminatory behaviour.

Issues raised by stakeholders are addressed below.

Quarterly maintenance reporting

Aurizon Network submitted its proposed quarterly maintenance report format to the QCA for approval under cl. 10.3.2 of the 2016 Undertaking in April 2017. The QCA approved the proposed quarterly maintenance report format in June 2017. Since then, the QCA has not proposed any further changes to the information reporting requirements for the quarterly maintenance report.

Noting that the QRC accepted Aurizon Network's proposed amendments to cl. 10.3.2(a)[1259], we consider that there are no obvious reasons to repeat this process once the UT5 undertaking is approved. In our view, Aurizon Network's proposed cl. 10.3.2(a) avoids unnecessary duplication of a process.

Nonetheless, it is important that the undertaking provides the flexibility to revise the format and content of the quarterly maintenance cost report from time to time, if needed. We consider that cl. 10.3.2(b) offers sufficient scope to require such revisions.

For these reasons, and subject to comments below relating to reporting of operational constraints, the QCA considers it appropriate to approve Aurizon Network's proposed drafting of cl. 10.3.2(a) of its 2017 DAU. The QCA has considered the factors set out in s. 138(2) including the legitimate business interests of Aurizon Network (s. 138(2)(b)) and the interests of access seekers and access holders (s. 138(2)(e) and (h)) and believe the provisions provide an appropriate balance.

Impacts of Aurizon Network's proposed maintenance planning and practices

Stakeholders said the lack of transparency over Aurizon Network's key operation and maintenance planning and practices can hinder coal supply chain planning and scheduling, and make it difficult to assess whether Aurizon Network is meeting its contractual requirements.[1260]

Aurizon Coal said it receives considerable information on Aurizon Network's maintenance plans[1261]—but it is presented in a way that can make it difficult to readily discern impacts on train path availability, and specific hauls. Aurizon Coal said that identifying the specific hauls and the hours in a day or days that such hauls cannot operate and increasing timeframes for which the information is provided would assist operators in improved planning and scheduling. It also

[1259] QRC, sub. 20, Annexure 1: 17.
[1260] Anglo American, sub. 57: 11; Glencore, sub. 60: 3, 7–8; Pacific National, sub. 66, p. 8; QRC, sub. 53: 38–39; QRC, sub. 65: 9–10.
[1261] Including on a rolling three week basis through the implementation of the Critical Asset Alignment Calendar (CAAC) that set outs the indicative hours of maintenance activity per day over the next 12-month period.

supported the provision of such information to non-operator access holders and supply chain users.[1262]

The QRC pointed to the 'gross imbalance' of information held by Aurizon Network and held by access holders and customers about the underlying reasons for a change in scheduling or availability of a train path—that has been exacerbated by changes to maintenance practices proposed by Aurizon Network in response to the QCA's draft decision.[1263] It said that greater transparency is required over the underlying reasons for train services being cancelled or not scheduled—and proposed additional monthly reporting obligations that require Aurizon Network to provide additional scheduling and supply chain performance information.[1264]

While Aurizon Coal supported greater transparency on maintenance planning, it considered that after-the-fact reporting/notification of operational constraints is of limited value in an operational context.[1265]

Aurizon Network did not support additional reporting requirements in light of potential disruptions to train services. It said that its maintenance activities are only one factor across the supply chain that may lead to disruption in train services. It also said that introducing additional reporting obligations would duplicate existing requirements and only act to penalise Aurizon Network, for example through incurring additional compliance costs.[1266]

Given the concerns raised in response to the draft decision and the consultation paper on maintenance matters, the QCA considers that Aurizon Network's proposed reporting regime is inadequate because it does not provide sufficient transparency and accountability around the impact of Aurizon Network's maintenance planning and practices on supply chain users.

The QCA requires Aurizon Network to amend its reporting requirements to provide additional information about train services that have been disrupted as a result of Aurizon Network imposing operational constraints.[1267] In that case, Aurizon Network must provide[1268] a quarterly report setting out:

- the reasons for the imposition of relevant operational constraints
- the steps taken by Aurizon Network to minimise the disruption to train services.

The focus is on circumstances where there has been significant disruptions to train services—where operational constraints have caused, or contributed to disruptions beyond an identified disruption threshold (currently set at 5 per cent of scheduled train services (monthly), or at the QCA's request).[1269]

In this way, Aurizon Network is held more accountable for its performance as an access provider and for its choices in balancing the delivery of contractual entitlements; the maintenance of the network; the need for flexibility to accommodate operational variations; and alignment with other elements of the supply chain.

[1262] Aurizon Coal, sub. 67: 4.
[1263] QRC, sub. 65: 8–9.
[1264] QRC, sub. 65: 10, Attachment 1.
[1265] Aurizon Coal, sub. 67: 4.
[1266] Aurizon Network, sub. 64: 24–25.
[1267] The QCA's views on Aurizon Network implementing operational constraints are set out in Chapter 17.
[1268] To be provided the QCA and to access holders, train operators and customers who have been affected by the operational constraints.
[1269] The threshold level may need to be revised over time, to account for practical considerations and changing operational practices.

Increasing transparency and accountability on why services have been cancelled or rescheduled will provide access holders, train operators and end users with better information to make informed decisions and have confidence in the regulatory regime. The QCA considers that this information could also be useful to Aurizon Network in better understanding its own performance and its contribution to the performance of the supply chain. The QCA has provided sufficient allowances for such reporting requirements.[1270]

The QCA considers that the new reporting requirements balance the interests of access seekers, access holders and Aurizon Network (ss. 138(2)(b),(e) and (h)) by increasing transparency and accountability without unduly imposing on Aurizon Network's legitimate business interests. Whilst Aurizon Network may be concerned about potential duplication in reporting that adds to costs, the QCA considers any additional costs are likely to small[1271] and, in any event have been provided for in the approved allowances.

Condition-based assessment reporting

Anglo American supported the condition-based assessment provisions, although it considered that assessment should fall on the original due date, irrespective of whether there is an extension of the undertaking term beyond four years.[1272]

The QCA considers that Aurizon Network’s 2017 DAU proposal is reasonable, and the proposed provisions provide a clear means to assess the condition of the network with respect to the undertaking term. As such, the QCA considers the provisions as proposed by Aurizon Network provide an appropriate balance of the s. 138(2) factors including s. 138(2)(a), (b) and (e). An important purpose of this assessment is to inform, if necessary, adjustments to the value of assets in the RAB. Clause 1.2(b) of Schedule E provides, among other things, a process to adjust asset values where:

- the network has deteriorated as a result of Aurizon Network’s failure to implement good operating practice and pursue prudent and effective maintenance and asset replacement policies and practices
- Aurizon Network has no plan to remedy that deterioration.

As such, it is useful for the process to be linked to the end of the regulatory period, as proposed by Aurizon Network, rather than to a fixed term as suggested by Anglo American. This is because the above matters can be assessed in the context of a replacement access undertaking being developed, which includes a forward-looking assessment of Aurizon Network’s maintenance and asset practices.

Aurizon Network's Board certification obligations

Stakeholders held varying views regarding the appropriate level of Board involvement.

- The QRC and Pacific National considered the Aurizon Network's Board should be required to certify Aurizon Network’s maintenance obligations and related performance outcomes.[1273]

[1270] For example, as discussed in Chapter 7, the QCA has accepted a number of proposed step changes for additional FTE’s across various functions, including reporting. The QCA considers these step-changes sufficiently recognise the impact of any minor incremental reporting and compliance obligations that this decision introduces.

[1271] The costs from additional reporting requirements are more than offset by the broader benefits from having increased transparency and accountability.

[1272] Anglo American, sub. 18: 22.

[1273] Pacific National, sub. 66, p. 8; QRC, sub. 65: 11.

- Aurizon Coal said that there is little value to be gained from Aurizon Network Board certification of maintenance outcomes after the fact.[1274]
- Aurizon Network said further compliance certification from members of the Aurizon Network Board was not required given that extensive compliance-based obligations already exist in the 2017 DAU[1275] and that Aurizon Network's Board members already have personal, statutory obligations outside the access regime to ensure that the rail network is maintained so as to operate safely.[1276]
- Aurizon Network also said the QCA is acting beyond its powers under the QCA Act with regard to the certification by the Aurizon Network Board on maintenance matters.[1277]

Having considered s. 138 factors including the legitimate business interests of Aurizon Network (s. 138(2)(b)) and the interests of access seekers and access holders (s. 138(2)(e) and (h)), the QCA considers requiring further involvement by Aurizon Network's Board is not necessary at this time, given:

- the increased accountability provided by the required amendments to Aurizon Network's reporting (above)
- the expanded obligations to minimise disruption to train services (see Chapter 17)
- amendments to strengthen and clarify Aurizon Network's obligation to participate in the development and implementation of productivity improvement initiatives to improve the efficiency and performance of supply chains (see Chapter 17).

Audit process

Pacific National submitted that the audit process could be improved by requiring the auditor to:

- consult with above-rail operators and other access holders to ensure that any stakeholder concerns regarding compliance are adequately addressed in the audit
- produce a confidential and public audit report, with the public report distributed to relevant stakeholders.[1278]

No other stakeholders commented on these matters.

In relation to Pacific National's first suggestion, we note that cl. 10.6.4(f)(iv) of Aurizon Network's 2017 DAU requires that the audit plan include:

> a process for consultation with the QCA during the audit to ensure that the audit addresses the matters and standards required by the QCA for the particular audit being conducted. The QCA may consult with Access Holders and Access Seekers over the matters and standards to be addressed in, and required of, the audit;

We consider that this provides an avenue for the QCA to consult with access holders and access seekers on matters relevant to an audit and consider any concerns raised regarding compliance.

[1274] Aurizon Coal, sub. 67: 4.
[1275] These include through detailed reporting arrangements (cl. 10.5.3), the appointment of a compliance officer to (cl. 10.5.1), the requirement to publish an annual compliance report (cl. 10.5.2) and requirements to undertake various compliance audits (cl. 10.6).
[1276] Aurizon Network, sub. 64: 26–27.
[1277] Aurizon Network, sub. 64: 27.
[1278] Pacific National, sub. 19: 23.

Clause 10.6.4(f)(iii) also requires establishment of a liaison group consisting of the auditor, Aurizon Network and the QCA, to provide a forum to resolve any audit issues as they arise.

We consider these provisions together provide scope for access seekers and access holders to have sufficient input into the conduct of audits, through the QCA.

In relation to Pacific National's second suggestion, the QCA is of the view that cl. 10.6.4(j) of Aurizon Network's 2017 DAU provides scope for the QCA to share audit reports with stakeholders. It states:

> the Auditor will provide Aurizon Network and the QCA a copy of:
>
> (i) the audit report; and
>
> (ii) any letter or report from the Auditor accompanying the audit report which explains the audit findings in greater detail,
>
> both of which the QCA may, if it considers it appropriate to do so, publish to parties thought appropriate by the QCA having regard to the scope of the audit and its findings;

It is not clear that further revisions to cl. 10.6.4 are necessary to achieve the outcomes sought by Pacific National.

Accordingly, having considered s. 138(2) factors, the QCA considers it appropriate to approve Aurizon Network's proposed drafting of cl. 10.6.4 of the 2017 DAU.

21 DISPUTE RESOLUTION AND DECISION MAKING

21.1 Aurizon Network's 2017 DAU proposal

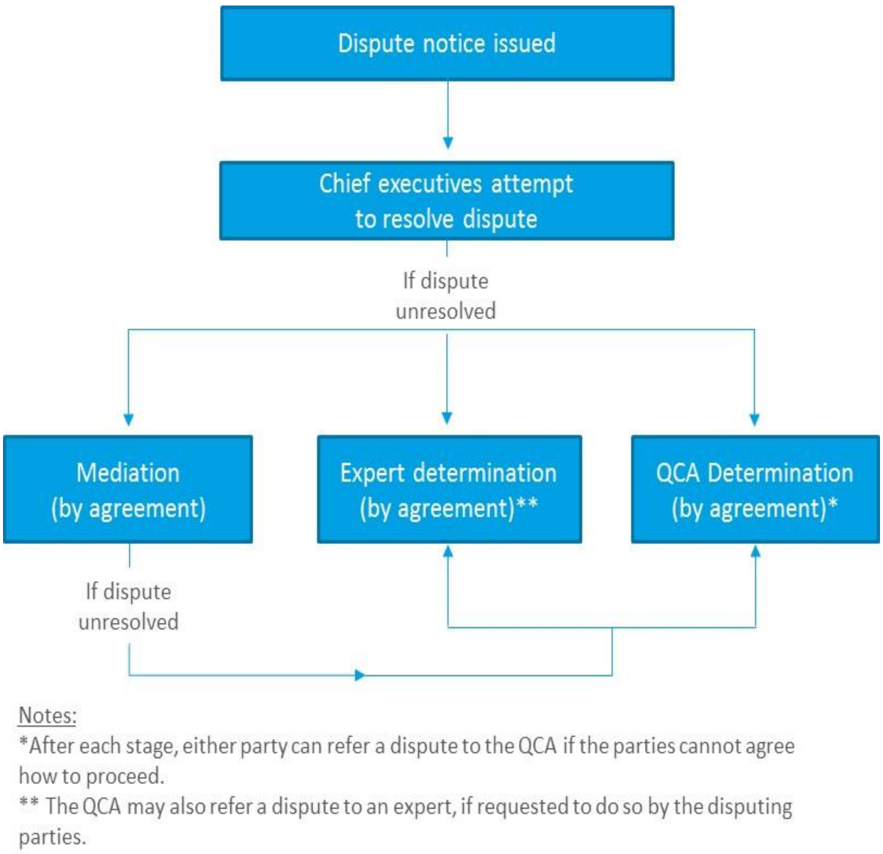
Part 11 of the 2017 DAU establishes a dispute resolution mechanism (cl. 11.1) and sets out the requirements and procedures to apply to the resolution and determination of certain categories of disputes.

Aurizon Network's proposed dispute resolution mechanism applies to disputes about:

- the negotiation of a standard agreement between Aurizon Network and the access seeker, train operator or customer that is the proposed party to the agreement[1279]
- the negotiation or grant of access, where the dispute is between Aurizon Network and an access seeker or prospective access seeker.

Part 11 outlines a staged approach to resolving disputes, starting with the disputing parties attempting to resolve the dispute between themselves, followed by mediation and/or a determination of the dispute by an expert or the QCA.

Figure 27 Overview of dispute resolution procedures proposed in the 2017 DAU



[1279] Aurizon Network did not propose to make the mechanism available to other parties.

There are significant differences between Aurizon Network's proposed dispute resolution mechanism in the 2017 DAU and the mechanism in Part 11 of the 2016 Undertaking. Ways in which Aurizon Network's 2017 DAU differs from the 2016 Undertaking include:

- a reduction in the scope of the mechanism, so that it is available to fewer parties and applies to a narrower range of matters
- limitation of the QCA's powers in making a determination under the undertaking
- the removal of the requirement to advise the QCA of disputes and keep the QCA informed about progress to resolve disputes and amendments to obligations regarding joinder of parties
- adjustments to the expert nomination process and requirements applying to experts' decisions.

Key issues identified during the QCA's investigation

The QCA has considered all elements of Part 11 of Aurizon Network’s 2017 DAU proposal in making its decision. The following issues attracted comment from stakeholders, or were identified for further consideration:

- the scope of the dispute resolution mechanism (section 21.2)
- the QCA's powers in undertaking a determination (section 21.3)
- the provision of information and joinder (section 21.4)
- determinations by experts and the procedure (section 21.5).

21.2 Scope of the dispute resolution mechanism

Aurizon Network's proposal

Clause 11.1.1(a) establishes the scope of the dispute resolution mechanism. The mechanism is proposed to apply to disputes about:

- the negotiation of a Standard Access Agreement or Standard User Funding Agreement between Aurizon Network and an access seeker that is a proposed party to the agreement
- the negotiation of a Standard Train Operations Deed between Aurizon Network and the train operator that is a proposed party to the deed
- the negotiation of any other standard agreement[1280] between Aurizon Network and an access seeker, customer or train operator that is a proposed party to the agreement
- in all other respects, the negotiation or grant of access where the dispute is between Aurizon Network and an access seeker or prospective access seeker.

Disputes about rights or obligations under agreements (for example, access agreements and train operations deeds) are to be dealt with in accordance with the provisions in those agreements, rather than the dispute resolution mechanism in Part 11 (cl. 11.1.1(c)).

[1280] A standard agreement is any agreement that is in the form of an approved Standard Access Agreement, Standard User Funding Agreement, Standard Studies Funding Agreement, Standard Train Operations Deed or Standard Rail Connection Agreement.

Aurizon Network, in its collaborative submission, said that refusing to vary the terms of a standard agreement for coal-carrying trains is not a dispute for the purposes of Part 11. However, it agreed amendments to clarify that disagreements regarding variations to the terms of a standard agreement for non-coal trains is a dispute for the purposes of Part 11.[1281]

A number of clauses throughout the 2017 DAU also refer disputes in relation to specific matters directly to the dispute resolution mechanism in Part 11. However, it is not clear how Part 11 of the 2017 DAU is intended to apply to these particular disputes if they fall outside those disputes listed in cl. 11.1.1(a).

QCA analysis and decision

Summary of decision 21.1

- **The QCA's decision is that the scope of the dispute resolution mechanism in Aurizon Network's 2017 DAU be amended to:**
  - **(a) allow parties to commence disputes in relation to not only the negotiation of access but also any of Aurizon Network's obligations under the undertaking; and to filter out disputes that are vexatious or an abuse of process**
  - **(b) include a broader scope of disputes that are subject to the dispute resolution provisions**
  - **(c) require disputes arising in relation to particular matters that are expressly referred to in Part 11, to be resolved in accordance with Part 11.**
- **The QCA's required amendments to Part 11 of Aurizon Network's 2017 DAU are provided in the Amended 2017 DAU at Appendix H.**

After considering stakeholder submissions and having regard to the factors set out under s. 138(2) of the QCA Act, the QCA's decision is that it is not appropriate to approve Aurizon Network's 2017 DAU in respect of the proposed scope of the dispute resolution mechanism.

The QCA considers that Aurizon Network's proposal in relation to Part 11 restricts the parties to, and scope of, the dispute resolution provisions in a way that is not appropriate to approve having regard the factors in s. 138(2) of the QCA Act. Generally, we consider that it is not appropriate that parties who receive the benefit of an obligation under an undertaking have no means under that undertaking to rectify a default or resolve a dispute in relation to that obligation. Similarly, it is not appropriate that the range of issues that can form the subject matter of a dispute under the undertaking is not commensurate with the scope of Aurizon Network's obligations under the undertaking.

Our consideration of these issues is structured as follows:

- parties to a dispute
- matters that can be disputed
- referral of particular disputes to Part 11.

Parties to a dispute

Aurizon Network said that the parties to a dispute can only be access seekers, as they are the only parties (other than an access provider) contemplated as being disputing parties under Part

[1281] Aurizon Network, sub. 26: 8 and Appendix 1.

5, Division 5 of the QCA Act; however, it said it has included train operators and customers within the 2017 DAU dispute resolution provisions on a voluntary basis.[1282]

Moreover, Aurizon Network said allowing additional parties to access the dispute resolution mechanism under the undertaking is detrimental to Aurizon Network and other supply chain participants, because it allows third parties to game the regulatory regime.[1283] It considered an area with high potential for gaming would be in the context of proposed expansions, where there may be a commercial advantage for a party in slowing down a competitor's new or increased mine production. It considered that giving 'anyone who might benefit from an access undertaking obligation' the right to commence a dispute over a rail expansion needed to accommodate that new or increased mine production will provide an avenue through which an attempt might be made to gain that advantage.[1284]

The QCA does not consider that the only parties who should be able to utilise the dispute resolution provisions in an access undertaking are those parties who can utilise the dispute resolution provisions under Part 5, Division 5 of the QCA Act. The QCA does not consider that the dispute resolution regime under Part 5, Division 5 of the QCA Act determines or constrains a dispute resolution regime in an access undertaking in that way. Nor does the QCA consider that it is appropriate to limit the dispute resolution regime to access seekers, train operators and customers in the manner proposed by Aurizon Network. Relevantly, an access undertaking may include obligations on the owner or operator to comply with decisions of the QCA or another person about disputes on matters stated in the undertaking (s. 137(2)(bb)).

The QCA notes Aurizon Network's statements that s. 137(2)(bb) cannot be relied upon by the QCA for including a broader dispute resolution regime in an access undertaking, including because it is a permissive provision outlining what may be included in an undertaking and it does not expressly authorise the imposition of an access dispute resolution power for the QCA.[1285]

We do not agree and consider that it is open to the QCA to require inclusion of a dispute resolution regime in the undertaking, as outlined in Appendix H, which is broader than the access dispute process set out under Part 5, Division 5 of the QCA Act. Section 137(2)(bb) of the QCA Act is not limited to access disputes and the fact that the QCA Act contains express provisions relating to the resolution of access disputes, and enforcement of undertakings does not limit the QCA's power to request an amendment to an undertaking that is broader than those matters, including in relation to the parties who can access the dispute resolution process, if it is considered appropriate to do so having regard to the s. 138(2) factors.

Aurizon Network has obligations under the undertaking that extend to parties other than access seekers, train operators and customers. The QCA does not consider it appropriate for parties who may be affected by Aurizon Network's obligations arising under an approved undertaking not to have access to a suitable dispute resolution mechanism under that undertaking.

Other stakeholders agreed that restricting the parties who can utilise the dispute resolution provisions, as proposed by Aurizon Network, is not appropriate.[1286]

[1282] Aurizon Network, sub. 1: 76–78; sub. 40: 317–19.
[1283] Aurizon Network, sub. 1: 76–78.
[1284] Aurizon Network, sub. 40: 319.
[1285] Aurizon Network, sub. 40: 318–19.
[1286] QRC, sub. 20: 32; sub. 53: 42; QCoal, sub. 16: 5; Pacific National, sub. 19: 11; sub. 61: 23; Anglo American, sub. 18: 25.

Whilst an access holder has recourse to dispute resolution provisions in its access agreement, the access agreement dispute resolution provisions can only be utilised in relation to disputes which arise under that access agreement. So, if the QCA was to approve Aurizon Network's proposed dispute resolution provisions, access holders who have a dispute arising under the UT5 undertaking, for example, may be without an ability to seek a practical and efficient remedy via the UT5 undertaking.

The QCA notes Aurizon Network's submissions that there is already a mechanism within the QCA Act which allows for the QCA or another person to apply to a court in relation to a purported breach of an undertaking, and that this represents parliament's intention for disputes about compliance with an undertaking to be resolved through court action, not arbitration by the QCA.[1287] The QCA does not consider that the inclusion of these remedial provisions in the QCA Act, either explicitly or implicitly, means that there cannot be a mechanism in an undertaking which allows for the resolution of disputes arising under that undertaking. The QCA agrees with the QRC's submission that the ability to commence court proceedings is less efficient and commercial than the practical dispute resolution procedures contained in the 2016 Undertaking, such as chief executive resolution and expert determination.[1288] For these reasons the QCA does not consider it appropriate to limit the parties who may utilise the dispute resolution provisions in the 2017 DAU.

As a further reason for limiting the parties who can raise a dispute, Aurizon Network expressed concerns about the potential misuse of the dispute resolution process. It provided, as an example, the possibility that a coal supply chain participant may misuse the dispute resolution process to favour its own project, or delay a competitor's project, in the context of an expansion.[1289] However, the QRC said that it is difficult to understand how Aurizon Network's changes are merely intended to prevent non bona fide disputes. The QRC suggested minimal changes to the relevant definitions could help to avoid vexatious disputes.[1290] QCoal supported measures that aim to limit the ability to raise a dispute to only parties with a genuine, bona fide interest, but does not support any other changes to the dispute resolution provisions.[1291]

The QCA does not consider that, in order to avoid the potential misuse of the dispute resolution procedures, it is appropriate to limit the parties who can raise a dispute to access seekers, train operators and customers in the manner proposed by Aurizon Network. To the extent there is a risk of gaming the dispute resolution framework by other parties, the QCA considers the appropriate way to address this risk is through the inclusion of requirements for disputes to not be vexatious or frivolous.

After having regard to all of the factors in s. 138(2) and considering stakeholder submissions on the matter, the QCA's decision is that it is not appropriate to approve Aurizon Network's proposed cl. 11.1.1(a) and it is appropriate to amend the 2017 DAU as per the drafting in Appendix H of this decision. This provision allows for parties to commence disputes in relation to not only the negotiation of access but also any of Aurizon Network's obligations under the undertaking.

The QCA agrees that the goal to avoid disputes that are not genuine is appropriate, but we do not consider that Aurizon Network's proposed means is appropriate. The QCA considers that an

[1287] Aurizon Network, sub. 1: 79; sub. 40: 319. See, for example, s. 158A of the QCA Act.
[1288] QRC, sub. 20: 33.
[1289] Aurizon Network, sub. 1: 77; sub. 40: 319.
[1290] QRC, sub. 20: 32.
[1291] QCoal, sub. 16: 5.

appropriate response would be to include, as a threshold issue, that disputes must not be vexatious or an abuse of process. To give effect to this, the QCA requires Aurizon Network to amend the definition of dispute as per the drafting of cl. 11.1.1(a) at Appendix H of this decision. This will allow all parties who have a genuine dispute in relation to matters arising under the UT5 undertaking to have a chance to have their dispute addressed whilst operating to filter out disputes that are vexatious or an abuse of process from the dispute resolution mechanism.

Aurizon Network considered that a vexatious dispute or abuse of process threshold for disputes would not be sufficient to address the risks of gaming and that it creates an additional threshold issue on which a third party can commence a dispute and therefore cause further delays. However, Aurizon Network indicated it was prepared to accept this requirement in so far as it only relates to disputes in relation to access in accordance with Part 5, Division 5 of the QCA Act.[1292]

The QCA considers the threshold requirement should act to exclude vexatious litigants. If in due course there is evidence that there are demonstrated instances where these threshold requirements have not appropriately dealt with vexatious disputes, the QCA can consider alternative arrangements in future undertaking processes.

Given this required amendment, the QCA does not consider it appropriate or necessary to include cl. 11.1.1(f), as proposed by Aurizon Network, which provided for s. 122 of the QCA Act[1293] to apply to all disputes under Part 11 of the 2017 DAU. The provisions in the QCA Act concerning access disputes, which include s. 122 of the QCA Act, already apply in relation to Part 11 of the 2017 DAU to access disputes which are to be determined by the QCA (cl. 11.1.5), subject to required amendments discussed below. Further, for disputes that are not access disputes, the QCA must have regard to those provisions of the QCA Act, which includes s. 122 of the QCA Act, when it develops a process for making that determination.

The QCA considers these combined amendments appropriately balance the legitimate business interests of Aurizon Network—in that Aurizon Network should not be subject to vexatious disputes (s. 138(2)(b))—with the interests of access seekers, access holders and other parties affected by obligations in the UT5 undertaking, as well as with the public interest—in having genuine disputes determined in accordance with an appropriate dispute resolution regime to which all affected parties have equal access (ss. 138(2)(d), (e) and (h)).

Matters that can be disputed

Compared to the 2016 Undertaking, Aurizon Network's 2017 DAU has, in addition to reducing the number of parties that may commence a dispute, also reduced the scope of the dispute mechanism such that fewer disputes can be the subject of Part 11. Aurizon Network said that the scope of the dispute resolution mechanism in the 2016 Undertaking is too broad, because it was larger than the scope of disputes which can be heard under the QCA Act.[1294]

[1292] Aurizon Network, sub. 40: 319.
[1293] Section 122 of the QCA Act enables the QCA to not start an arbitration or end an arbitration without making an access determination in certain circumstances, including if the QCA considers the giving of the dispute notice was vexatious.
[1294] Aurizon Network, sub. 1: 79.

Aurizon Network said that the QCA has no jurisdiction to hear disputes about breaches of the undertaking, nor could it vest itself with powers to hear such disputes. Rather, the QCA Act sets out clear remedies for the enforcement of an approved access undertaking.[1295]

Other stakeholders said that relying solely on the compliance provisions of the QCA Act is insufficient and is not comparable to practical and commercial dispute resolution procedures such as chief executive resolution and expert determination, and that the 2016 Undertaking provisions should be reinstated.[1296]

QCoal said that, except for changes in relation to limiting the ability to dispute to bona fide parties, it did not support any other changes from the 2016 Undertaking as proposed by Aurizon Network. It also said:

> A robust and fair dispute resolution process is essential in any relationship where there is an imbalance of information and power, and the Draft UT5 proposed by Aurizon Network does not provide for a fair and equitable mechanism to enable genuine disputes to be aired. [1297]

The QCA agrees with stakeholders that it is appropriate if parties affected by matters arising under an undertaking are able to raise a dispute in relation to those matters. There are practical and efficient avenues for resolving a dispute under the previous 2016 Undertaking provisions, which provide opportunities for the parties to a dispute to seek resolution without having to incur the time and expense required to take a matter to court. The QCA does not agree with Aurizon Network that the scope of the dispute resolution provisions in an undertaking must be limited to the scope of the dispute resolution provisions in the QCA Act. Nor does the QCA agree that, because there are compliance provisions in the QCA Act, it is impermissible to include dispute resolution provisions in an undertaking.

The QCA Act explicitly provides that an undertaking may include details of an obligation on an access provider to comply with decisions (by the QCA or another person) on disputes about matters stated in the undertaking.[1298] The QCA notes that parties to a Standard Access Agreement agree that, in relation to disputes arising under that access agreement, their disputes can be heard under the dispute resolution provisions of that agreement. Those disputes are therefore outside the scope of the dispute resolution provisions in the undertaking.[1299] However, without including dispute resolution provisions that are broader than those proposed by Aurizon Network, parties who have a bona fide dispute arising under the terms of the undertaking (as opposed to an access agreement) may be without a practical and cost-effective mechanism to resolve the dispute.

In these circumstances, the QCA considers that it is not appropriate to approve Aurizon Network's 2017 DAU in regard to the scope of disputes which may be subject to the dispute resolution provisions in Part 11. The QCA's decision is that it is appropriate to include broader dispute resolution provisions, having regard to all the factors in s. 138(2) of the QCA Act, in particular the interests of access seekers, access holders, the legitimate business interests of Aurizon Network and the public interest (ss. 138(2)(b), (d), (e) and (h)). Furthermore, the inclusion of broader dispute resolution provisions supports the object of Part 5 of the QCA Act (s. 138(2)(a)), as investment in the network and dependent market competition are likely to be

[1295] Aurizon Network, sub. 1: 75–79; sub. 40: 320.
[1296] QRC, sub. 20: 33; sub. 53: 42; QCoal, sub. 16: 5; Pacific National, sub. 19: 11.
[1297] QCoal, sub. 16: 5.
[1298] Section 137(2)(bb) of the QCA Act.
[1299] See s. 112 of the QCA Act.

promoted by the regulatory certainty arising from a stated dispute resolution process for parties whose interests are affected by an access undertaking.

The QCA's decision is therefore that it is not appropriate to approve Aurizon Network's proposal in relation to the matters that can be disputed and to require Aurizon Network to amend the dispute resolution provisions as provided in Appendix H of this decision.

In addition, participating stakeholders reached consensus that an amendment to cl. 11.1.1(b) should be included to ensure that non-coal-carrying train service agreements are not inadvertently exempted from the dispute resolution provisions because the dispute relates to a refusal by a party to vary the terms of a Standard Access Agreement.[1300] The QCA considers this proposed amendment is appropriate, given that the Standard Access Agreement is drafted as if all access seekers will be negotiating for coal-carrying train services and, as such, access seekers for non-coal carrying train services will inevitably be required to vary the Standard Access Agreement.

It is otherwise appropriate to exclude disputes about refusing to vary the Standard Access Agreement because Part 5 of the 2017 DAU provides that if the parties cannot agree variations, any dispute will be resolved by entry into the Standard Access Agreement. Keeping this structure maintains the integrity of the 'safe-harbour' purpose of the standard agreements.

For consistency in Aurizon Network's 2017 DAU, the QCA's decision is that it is appropriate to require Aurizon Network to amend cl. 5.1(e) as provided in Appendix H of this decision, to make clear that:

- where the terms of an access agreement for coal-carrying services cannot be agreed, the dispute is resolved by entry into the Standard Access Agreement and is not a dispute for the purposes of Part 11
- where the terms of access for non-coal-carrying services cannot be agreed, the dispute is resolved under the dispute resolution mechanism in Part 11 by the QCA or an expert completing an access agreement consistent with the Standard Access Agreement, but amended to reflect the fact that the access is for non-coal-carrying services.

However, disputes about the completion of the schedules to a Standard Access Agreement (or other standard agreements) should be able to be resolved within the Part 11 dispute resolution regime to avoid stifling access. This is reflected in the required amendments in Appendix H of this decision.

The QRC and Aurizon Network supported the amendments to Part 5 of the 2017 DAU,[1301] with Aurizon Network also proposing these amendments to be made to the corresponding clause for the negotiation of a Train Operations Deed.[1302] The QCA agrees with Aurizon Network's proposal and this is reflected in cl. 5.3(e) of the Amended 2017 DAU (see Appendix H).

Referral of particular disputes to Part 11

In the 2016 Undertaking, cl. 11.1.1(a)(iii) provides that disputes arising in relation to particular matters expressly required to be resolved in accordance with Part 11 must be resolved in accordance with Part 11. The 2017 DAU does not include a similar provision. However, there are

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[1300] Aurizon Network, sub. 26: 8, sub. 40: 320; Pacific National, sub. 28: 2. The QRC did not comment on this particular amendment.
[1301] QRC, sub. 53: 41.
[1302] Aurizon Network, sub. 48: cl. 5.3(e).

multiple instances of particular matters throughout the 2017 DAU that expressly refer disputes to Part 11.[1303] Without a similar provision, and given Aurizon Network otherwise has sought to limit the scope of disputes (both as to subject matter and parties), there is likely to be confusion as to whether or not referred disputes can benefit from the dispute resolution provisions.

Aurizon Network considered the QCA's position on the referral of particular matters was not justified or permitted under the QCA Act [1304], while other stakeholders did not comment on this issue directly other than to note generally that the 2016 Undertaking dispute resolution provisions should be reinstated.

The QCA does not consider it appropriate to approve this aspect of Aurizon Network's 2017 DAU, as the uncertainty created is not in the interests of any of the parties, including Aurizon Network or any other party impacted by obligations under the 2017 DAU (s. 138(2)(b), (e) and (h)). Rather, it is appropriate to amend the 2017 DAU as set out in Appendix H.

21.3 The QCA's powers in undertaking a determination

Aurizon Network's proposal

In cl. 11.1.5 of Aurizon Network's 2017 DAU, Aurizon Network proposed to align the dispute resolution procedures in respect of determinations by the QCA, to those contained in the relevant parts of the QCA Act. This includes:

- making disputes under the undertaking subject to, and in accordance with, Part 5, Division 5 of the QCA Act (cl. 11.1.5(c))
- providing that dispute notices under the undertaking must comply with ss. 112 and 113 of the QCA Act (cl. 11.1.5(d)(ii)).

Aurizon Network did not propose to include clauses requiring it to provide notifications or correspondence to the QCA about disputes.[1305]

[1303] For example, cls. 2.6(c), 6.2.5(a), 7A.2.1, 7A.6(f) and 9.1(n).
[1304] Aurizon Network, sub. 40: 320.
[1305] For example, cl. 11.1.5(g) of the 2016 Undertaking.

QCA analysis and decision

Summary of decision 21.2

- **The QCA's decision is that the arrangements for determinations made by the QCA under Part 11 of Aurizon Network's 2017 DAU be amended so that:**
  - **(a) access disputes that arise under the UT5 undertaking provisions are to be determined by the QCA subject to, and in accordance with, Part 5, Division 5 of the QCA Act**
  - **(b) disputes that are not access disputes are to be determined by the QCA through a process it considers appropriate, subject to particular limitations**
  - **(c) when the QCA is appointed as the arbiter of a dispute under the 2017 DAU, the QCA may hear disputes in relation to matters and between parties who may not be within the scope of the dispute resolution provisions of Part 5, Division 5 of the QCA Act**
  - **(d) for disputes that are not access disputes, before the determination by the QCA can commence, the parties must agree, in a legally binding way, to be bound by the outcome of the dispute, including agreement to pay each other's costs as ordered by the QCA**
  - **(e) cl. 12.2 (Interpretation) be broadened to make provision for the possibility that the relevant Queensland legislation is repealed and replaced.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in the Amended 2017 DAU at Appendix H.**

Having regard to all the factors in s. 138(2) of the QCA Act, and after considering stakeholder submissions on this matter, the QCA's decision is to refuse to approve cl. 11.1.5 of the 2017 DAU in respect of determinations made by the QCA.

Aurizon Network said:

- Dispute resolution under the QCA Act for access disputes must form the framework for any proposed dispute resolution process.
- UT5 cannot be inconsistent with the dispute resolution powers of the QCA and the dispute resolution requirements under the QCA Act.
- Aurizon Network cannot vest the QCA with powers it does not have under the QCA Act and the QCA cannot vest itself with any such powers.
- The QCA only has power to resolve disputes to which Part 5, Division 5 of the QCA Act applies. Therefore, provisions that purport to permit the QCA to determine disputes which cannot be the subject of Part 5, Division 5 of the QCA Act have not been included in the 2017 DAU.[1306]

The QCA does not agree that the dispute resolution mechanism within an undertaking must necessarily be aligned with the dispute resolution provisions in Part 5, Division 5 of the QCA Act, nor that the QCA only has the power to resolve disputes under Part 5, Division 5 of the QCA Act.

The QCA Act contemplates (for example, in s. 137(2)(bb)) that an undertaking may include dispute resolution provisions and that disputes utilising an undertaking's dispute resolution provisions may be determined by the QCA or another person. The QCA, when determining disputes under an undertaking is not merely applying, and conforming to, the QCA Act

[1306] Aurizon Network, sub. 1: 75–76; sub. 40: 322.

provisions in relation to a dispute; rather, it is separately appointed to determine disputes which arise under the undertaking. These disputes are distinct from disputes heard under the QCA Act. If the QCA could only hear access disputes under the QCA Act, there would be no need for separate dispute resolution provisions in an undertaking. On the contrary, the QCA Act contemplates that dispute resolution provisions may be included in an undertaking (and can be determined by the QCA).

The QRC said that an undertaking is not required to be limited to the matters specifically called out under the QCA Act. If that were the case, there would be little point in requiring an undertaking at all.[1307] Likewise, while other stakeholders did not comment directly on this aspect of the 2017 DAU, they said that, generally, the UT4 disputes resolution provisions should be reinstated or the 2017 DAU provisions expanded.[1308]

The QCA does not consider it is appropriate to approve Aurizon Network's proposed cl. 11.1.5. We consider that it is appropriate for the 2017 DAU to have dispute resolution provisions that allow for the QCA—when it is appointed as the arbiter of a dispute under an undertaking—to hear disputes in relation to matters and between parties that may not be within the scope of the QCA Act dispute resolution provisions.

There are many aspects of an undertaking about which there may be disputes but that are not necessarily about access, for example:

- capacity assessments
- expansions
- line diagrams
- system rules
- system operating parameters
- network development plans
- ring-fencing
- other technical matters.

For the reasons set out above in section 21.2, the QCA considers it appropriate that the dispute resolution provisions in the 2017 DAU apply to a broader range of parties and subject matters than is contemplated in Aurizon Network's 2017 DAU. Furthermore, we consider it appropriate that the QCA is designated as the arbiter under the 2017 DAU for disputes (subject to those disputes being considered appropriate to be resolved by way of expert determination discussed in section 21.5).

While we do not consider the undertaking's dispute resolution process should be limited by Part 5, Division 5 of the QCA Act, we consider that, where possible, disputes handled by the QCA under the access undertaking should be handled in a manner that is consistent with the provisions of Part 5, Division 5 of the QCA Act. Accordingly:

- for disputes that are access disputes, the QCA's determination must occur subject to, and in accordance with, Part 5, Division 5 of the QCA Act

[1307] QRC, sub. 20: 31.
[1308] QCoal, sub. 16: 5; Pacific National, sub. 19: 11; Anglo American, sub. 18: 25.

- for disputes that are not access disputes, the QCA must not make a determination that is inconsistent with the Part 5, Division 5 of the QCA Act, unless the parties agree and no other party is adversely affected.

The QCA notes Aurizon Network's 2017 DAU includes arrangements for determinations by the QCA to be final and binding, subject to the limitations in cl. 11.2 (cl. 11.1.6(b)). However, to ensure this is given effect to and all parties to a dispute are bound by the outcome, we consider it is appropriate to include a requirement that before a QCA determination commences, all parties agree in a legally binding way to be bound by the determination. We consider this requirement should apply to all disputes that are not an access dispute for the purposes of Part 5, Division 5 of the QCA Act. This is because the binding nature and enforcement of access dispute arbitrations are already dealt with under the QCA Act.

It is also appropriate that, before a dispute may commence, parties to a dispute should be required to agree to pay any order by the QCA as to the payment of each other's costs for the dispute. Otherwise, there may be further disputes as to who will bear the costs of an arbitration. We consider this requirement should only apply to disputes that are not an access dispute for the purposes of Part 5, Division 5 of the QCA Act, given that cost orders for access disputes are already dealt with under the QCA Act (s. 208).

The QCA notes Aurizon Network's comments that the inclusion of a requirement that parties sign a legally binding agreement to be bound by the outcome of a dispute, including as to costs awarded by the QCA, indicates the QCA does not have power to hear and determine these disputes.[1309] However, s. 137(2)(bb) of the QCA Act provides that an undertaking may include details of 'an obligation on the owner or operator to comply with decisions of the authority or another person about disputes about matters stated in the undertaking.'

For the reasons set out above, the QCA does not consider that it is appropriate for the dispute resolution process to be limited in the way proposed by Aurizon Network. It is more efficient and in the public interest that the QCA (or an expert) can hear disputes arising under an undertaking (s. 138(2)(d)). It is also in the interests of all parties to have equal access to the dispute procedure and certainty as to costs and the binding nature of the process (ss. 138(2)(b), (e) and (h)). Therefore, the QCA requires that the 2017 DAU be amended to require the parties to a dispute that is not an access dispute for the purposes of Part 5, Division 5 of the QCA Act to:

- agree to be legally bound by the outcome before the QCA can commence with a determination
- agree to be bound by any order by the QCA to pay each other's costs for the dispute.

To ensure the determination process is not stifled, the parties should be required to act reasonably and in good faith to reach agreement as soon as reasonably practicable.

For disputes that are access disputes for the purposes of Part 5, Division 5 of the QCA Act, the relevant provisions of the QCA Act will deal with compliance with a determination and cost orders made by the QCA.

It is also not appropriate to include Aurizon Network's proposed cl. 11.1.5(d)(ii), which requires s. 112 of the QCA Act to be satisfied before a dispute may be referred to the QCA, as this would restrict referrable disputes to only access disputes.

[1309] Aurizon Network, sub. 40: 323.

The 2016 Undertaking includes examples of determinations that are not inconsistent with the undertaking, such as determinations relating to the interpretation or application of the undertaking, or whether a party has complied with the undertaking. The QCA notes these examples have not been included in Aurizon Network's 2017 DAU.

Aurizon Network did not support the inclusion of the examples of determinations that are not inconsistent with the undertaking. It expressed concern that this would enable the QCA to make decisions at odds with an express provision of the undertaking and make a finding that Aurizon Network has failed to comply with the terms of the undertaking where there is no basis for that conclusion having regard to the relevant conduct and the drafting and effect of the undertaking.[1310]

The QCA does not consider it necessary to include these examples in the 2017 DAU.

Consistency with safety management system and legislative requirements

Aurizon Network said that any determination by the QCA must not be inconsistent with Aurizon Network's safety management system and applicable safety or environmental legislation.[1311] This is reflected in cl. 11.1.5(e) of Aurizon Network’s 2017 DAU.

In the absence of this requirement, Aurizon Network expressed concern the QCA would make a determination that could result in Aurizon Network breaching its contractual and legal obligations to comply with its accreditation, safety management system and applicable safety or environmental obligations. It considered it ‘manifestly unreasonable and unacceptable’ that Aurizon Network’s business and its senior executives could be subject to severe adverse consequences due to Aurizon Network’s compliance with a QCA determination that is inconsistent with Aurizon Network’s safety management system or its obligations under safety or environmental legislation. Aurizon Network considered its obligation to comply with its safety management system should prevail over the general requirement to comply with UT5 to the extent of any inconsistency.[1312]

Aurizon Network also considered its proposed requirement merely gives effect to an existing constraint on the QCA, albeit in more general terms, under s. 120(1)(d) of the QCA Act. This section requires the QCA to have regard to the public interest when making access determinations. Aurizon Network considered it would be ‘manifestly against’ the public interest for the QCA to be able to make a determination that would impose on Aurizon Network an outcome that could be inconsistent with its safety obligations. It considered that the public interest would be better protected by an explicit prohibition of the QCA making such a determination, rather than reliance on the more general s. 120(1)(d) of the QCA Act.[1313]

The relevant safety legislation (for example, the current Rail Safety National Law (Queensland)) prescribes that an approved safety management system is required for accreditation. However, the actual content of a safety management system could potentially differ between service providers. That is, different safety management systems could satisfy the requirements and be approved under the relevant Act. Pacific National said it was concerned that dispute

[1310] Aurizon Network, sub. 40: 323–324.
[1311] Aurizon Network, sub. 1: 81–82; sub. 40: 324–325.
[1312] Aurizon Network, sub. 40: 325.
[1313] Aurizon Network, sub. 40: 325.

determinations be restricted by a document produced and controlled by Aurizon Network, one of the parties to that dispute.[1314]

The QRC said that it would be willing to consider the amendments in relation to consistency with safety matters if the rest of Part 11 is reinstated as it is under the 2016 Undertaking.[1315]

The QCA recognises the importance of safety-related matters and compliance with relevant laws. We also note Aurizon Network's concerns about ensuring compliance with its safety obligations, as well as Pacific National's concerns about the QCA, when making a determination, being bound by Aurizon Network's safety management system, being a document produced by one party to the dispute.

As discussed above, the QCA considers that any QCA determinations of disputes that are access disputes for the purposes of Part 5, Division 5 of the QCA Act should be made subject to, and in accordance with, the relevant sections of the QCA Act.

The QCA notes that under those provisions of the QCA Act, the QCA is required to have regard to various matters when making an access determination, including the public interest (as identified by Aurizon Network) but also the operational and technical requirements necessary for the safe and reliable operation of the network (s. 120(i))—undoubtedly, one of these requirements is Aurizon Network's safety management system and any applicable legislation. Safety is no doubt an important issue and it will also have relevance to a number of the other factors the QCA is required to have regard to under the QCA Act, including the object of the regime and the interests of the respective parties. These factors will ensure that safety-related matters are appropriately considered and accounted for in the QCA's determination.

The QCA does not consider it appropriate to include a further requirement under the undertaking that these determinations of access disputes must also not be inconsistent with Aurizon Network's safety management system or its obligations arising under applicable safety or environmental legislation, as this is not prescribed under the QCA Act.

Nonetheless, the QCA does accept the inclusion of the requirement in cl. 11.1.5 of Aurizon Network's 2017 DAU for the QCA to:

- seek the advice of the rail safety regulator in relation to any aspect of the dispute that any party considers to be a safety-related matter
- not make any decision that is inconsistent with the safety regulator's advice.

This mechanism is consistent with that included in the 2016 Undertaking and means that Aurizon Network (or any other party to the dispute) has the ability to require the QCA to obtain the advice from the safety regulator, with the QCA required to provide to the parties any advice it receives. Any decision of the QCA must not be inconsistent with that advice. The QCA considers this mechanism provides, within the context of the QCA Act framework, an appropriate means by which safety-related matters for all parties to a dispute can be resolved, having regard to the factors in s. 138(2), including the object of Part 5 of the QCA Act, the legitimate business interests of Aurizon Network, the interests of access seekers and holders, and the public interest (s. 138(2)(a), (b), (d), (e) and (h)).

For determinations of disputes that are not an access dispute for the purposes of Part 5, Division 5 of the QCA Act, the QCA, at this time, considers it appropriate to include the

[1314] Pacific National, sub. 19: 11.
[1315] QRC, sub. 20: 33.

requirement for the QCA to not make a determination that is inconsistent with Aurizon Network's safety management system or its obligations arising under applicable safety or environmental legislation. However, the QCA will monitor the operation of this requirement during the term of the approved UT5 undertaking and may consider alternative arrangements in future should it have an inappropriate impact on the dispute resolution process in future.

For clarity, cl. 12.2 (Interpretation) of the 2017 DAU should be amended to address any possible successor legislation, or otherwise make provision for the possibility that the relevant Queensland legislation will be repealed and replaced.

21.4 Provision of information and joinder

Aurizon Network's proposal

Under cl. 11.1.1(d) of Aurizon Network's 2017 DAU, either party to the dispute may invite the following party(s) to join the dispute if the inviting party is of the reasonable opinion that the dispute (or the outcome or consequences of the dispute) may be relevant to that party:

- For disputes between Aurizon Network and a prospective access seeker, access seeker or customer (who is not also a railway operator), either party to the dispute may invite the relevant railway operator.
- For disputes between Aurizon Network and a railway operator, either party may invite the relevant prospective access seeker, access seeker or customer.

Aurizon Network has not included the requirement to keep the QCA and relevant operators or access seekers (as the case may be) regularly informed in respect of disputes and to provide the QCA with copies of formal correspondence between the parties to a dispute.[1316]

QCA analysis and decision

Summary of decision 21.3

- **The QCA's decision is that Aurizon Network's 2017 DAU be amended to:**
  - **(a) require Aurizon Network or the other initial party to a dispute to provide a copy of the dispute notice to train operators, access seekers or access holders (as applicable) to whom the dispute, or outcome or consequences of the dispute is relevant**
  - **(b) allow the relevant party to make an application to join the dispute, provided the application is not vexatious or an abuse of process**
  - **(c) require the QCA to give notice in accordance with s. 114 of the QCA Act when a dispute is referred to the QCA in accordance with the undertaking.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in the Amended 2017 DAU at Appendix H.**

After having regard to all the factors listed under s. 138(2) of the QCA Act and the submissions received on this matter, the QCA's decision is to refuse to approve Aurizon Network's 2017 DAU in respect of joinder and provision of information in relation to disputes.

[1316] For example, cl. 11.1.5(g) of the 2016 Undertaking.

21.4.2 Joinder of parties

Aurizon Network said that it is neither necessary nor beneficial to require Aurizon Network to invite train operators or access seekers (as applicable) to join a dispute if the outcome or consequences of the dispute would not be relevant to that joined party.[1317] It also said a requirement to notify all potentially impacted parties to a dispute unnecessarily increases the regulatory burden on parties to a dispute and will result in further delays in resolving disputes.[1318]

The QRC disagreed with the proposed change. It said that allowing parties to elect to become part of a dispute reflects the integrated nature of disputes.[1319] Other stakeholders did not comment on this matter directly, but said that, generally, the 2016 Undertaking dispute resolution provisions should be reinstated.

Disputes and disagreements may have an impact on more than just the two most immediate parties to that dispute. Accordingly, it is appropriate for there to be a mechanism for other potential parties to be invited to join the dispute. The QCA agrees with Aurizon Network on a requirement of relevance and considers it appropriate for the dispute, or the outcome or consequences of the dispute, to have relevance to a potential party before being invited to join that dispute. However, the QCA considers that if there is that relevance, the potential party should be invited to join the dispute, rather than the initial parties to the dispute still having a discretion to not give an invitation. Parties who receive notice of a dispute are not required to enter into the dispute and are not likely to enter into disputed matters lightly. However, they should be given the opportunity to join if the dispute is relevant to them.

The QCA's decision is therefore to refuse to approve this aspect of Aurizon Network's 2017 DAU. To protect against the joinder mechanism being misused, any joinder application should be subject to a requirement that the joinder to the dispute is not vexatious or an abuse of process. The QCA considers it appropriate for Aurizon Network's 2017 DAU to be amended in the way set out in cl. 11.1.1(e) of Appendix H.

21.4.3 Provision of information

Aurizon Network said that it is not necessary to keep the QCA regularly informed in relation to disputes and to provide all formal notices. It was also concerned that such requirements may be problematic in respect of matters like waiver of legal professional privilege.[1320]

The QCA considers there is significant merit in retaining an open and transparent dispute resolution process. It would encourage the timely resolution of disputes and also provide useful information in respect of the operation of the undertaking, which is in the interests of Aurizon Network, access seekers and users, as well as in the public interest (ss. 138(2)(b),(d), (e) and (h)).

However, the QCA does not consider that Aurizon Network should be required to continue to provide subsequent notices to the relevant railway operator or access seeker in a dispute to which that party has elected not to be joined. As such, we consider that Aurizon Network's proposal to not be required to provide to the relevant party all notices and correspondence

[1317] Aurizon Network, sub. 1: 78.
[1318] Aurizon Network, sub. 40: 326.
[1319] QRC, sub. 20: 32.
[1320] Aurizon Network, sub. 1: 78 and Appendix P.1: 19.

subsequent to a dispute notice is appropriate. A party that elects to join the dispute will receive all subsequent notices via the dispute process.

Further, the QCA does not consider there are material benefits to the dispute resolution process if the QCA is provided with dispute notices, subsequent correspondence, notices that a dispute is referred to mediation or an expert, or is otherwise kept regularly informed about a dispute. Therefore, we accept Aurizon Network's proposal in this regard.

However, we consider it is appropriate for the QCA to inform relevant parties of the referral of a dispute for determination, consistent with s. 114 of the QCA Act. It is in the public interest and in the interest of access seekers and users for a consistent notification procedure to apply to disputes being determined by the QCA (ss. 138(2)(d), (e), and (h)). Aurizon Network supported the inclusion of this requirement.[1321]

Our decision is to include the notice requirement for referrals of disputes to the QCA under the undertaking as set out in Appendix H.

21.5 Determinations by experts and procedure

Aurizon Network's proposal

Clauses 11.1.4 and 11.1.6 cover matters relating to determinations by an expert or the QCA. Under Aurizon Network's proposal, an expert will no longer be nominated by the QCA (in default of agreement by the parties as to an expert). Instead, Aurizon Network included a specific selection of relevant people who will nominate experts in their relevant fields. This expert selection regime is similar to the corresponding regime contained in the current approved Standard Access Agreement. An expert's determination is also constrained by safety matters and the QCA Act.

Expert determination (cl. 11.1.4)

If a dispute is referred to an expert, the expert must be appointed by agreement between the parties to the dispute. If the parties fail to reach agreement, the expert will be appointed according to the process in cl. 11.1.4(b). Under this process, the expert to be appointed is the person nominated by:

- the President of the Institute of Chartered Accountants in Australia, if the parties agree the dispute is purely of a financial or accounting nature
- the President of the Resolution Institute, if the parties agree the dispute is purely of a technical nature
- the President of the Queensland Law Society, in all other cases.

Clause 11.1.4 sets out the requirements that apply to the expert when it makes a determination. These requirements include not making a determination that is inconsistent with the QCA Act or Aurizon Network's obligations under safety or environmental legislation, and only making a determination the QCA could make if the matter in dispute were arbitrated by the QCA under the QCA Act. The dispute must also be determined in accordance with the expert determination rules of the Resolution Institute, to the extent those rules are not inconsistent with the terms in cl. 11.1.4. The clause also places obligations on the disputing parties.

[1321] Aurizon Network, sub. 40: 326.

Unless otherwise agreed, the expert's costs must be borne equally between the parties (cl. 11.1.4(b)(iv)) and each party must bear its own costs of participating in the process (cl. 11.1.4(i)).

When determinations are binding (cl. 11.1.6)

Under cl. 11.1.6(b), determinations by the QCA or an expert are binding, unless:

- in the case of a determination by an expert, the QCA determines that there has been a manifest error or fraud in the expert's decision or the expert has not complied with certain requirements relating to the expert's ongoing independence and impartiality[1322]
- in the case of a determination by the QCA, the determination is successfully challenged on the basis of a breach of a requirement in cl. 11.2.

Procedural matters

Aurizon Network deleted the provision that governs the interplay between Part 11 and Part 8 disputes and has included a number of amendments to account for the fact that there may be more than two parties to a dispute (cls. 11.1.2, 11.1.3, 11.1.4(h) and 11.1.6).

QCA analysis and decision

Summary of decision 21.4

- **The QCA's decision is that Aurizon Network's 2017 DAU be amended to:**
  - **(a) include an obligation for CEO-level discussions to have failed before a dispute is referred to an expert**
  - **(b) include the Queensland Law Society as a fall-back nominator if the parties fail to agree on the nature of the dispute**
  - **(c) change the term 'Institute of Chartered Accounts in Australia' to 'Chartered Accountants Australia and New Zealand'**
  - **(d) require the parties to agree to be bound by the outcome of the expert determination before it commences and agree how the costs and disbursements will be paid**
  - **(e) remove the requirement for an expert to not make a determination that is inconsistent with the QCA Act**
  - **(f) include a provision that those matters which are specific to a dispute arising under Part 8 prevail over the provisions of Part 11 to the extent of any inconsistency.**
- **The QCA's required amendments to Aurizon Network's 2017 DAU are provided in the Amended 2017 DAU at Appendix H.**

After having regard to all of the factors in s. 138(2) of the QCA Act, and considering all stakeholder submissions on the subject matter, the QCA's decision is to not approve Aurizon Network's 2017 DAU proposal.

[1322] A party to the dispute may ask the QCA to decide whether the determination is binding (cl. 11.1.4(h)).

21.5.2 Expert determination

Expert nomination process

Aurizon Network said that it is in the legitimate business interests of itself and the parties who have a right to raise a dispute to have certainty about how the expert nomination process works.[1323] Aurizon Network also raised the possibility of complicating factors brought about by the QCA nominating an expert and being required to determine if there has been a manifest error made by that expert.[1324]

For these reasons, Aurizon Network proposed that the expert nomination process should be pre-agreed in the 2017 DAU and the decisions should be made by independent third parties in the absence of agreement by the parties to the dispute.

The QRC said that it is willing to accept the changes to the appointment of an expert.[1325] However, the QRC did include some variations to the relevant provisions in its proposed DAU drafting. These include inserting the obligation for CEO-level discussions to have failed before a dispute is referred to an expert and deleting nomination for financial matters by the Institute of Chartered Accountants. The QRC also suggested that the Queensland Law Society operates as a fall-back nominator if the parties fail to agree on the nature of the dispute.[1326]

We consider that it is appropriate to amend Aurizon Network's expert nomination process, in the way set out in Appendix H.

Aurizon Network's nomination process largely replicates the equivalent process under the Standard Access Agreement. It is in the parties' interests to have certainty regarding the nomination process; and given that stakeholders generally agree, we consider that the proposal is appropriate.

However, we also agree with the QRC that the parties should be required to exhaust CEO-level discussions first. This is more cost-effective for all involved and may avoid bringing in third parties. Accordingly, the QCA considers it appropriate for Aurizon Network's 2017 DAU to be amended in this regard. Aurizon Network supported the inclusion of this requirement.[1327] We consider this decision is appropriate having regard to the factors set out in s. 138(2) of the QCA Act, as it furthers the public interest to enable privately resolvable matters to be settled in an efficient manner, balanced with the interests of all parties in providing a clear dispute resolution process (s. 138(2)(b), (d), (e) and (h) of the QCA Act).

The nomenclature of the 'Institute of Chartered Accountants in Australia' is not current and should be amended to 'Chartered Accounts Australia and New Zealand'. Further, and also in the interest of certainty to all parties, if parties fail to agree the nature of the dispute, the Queensland Law Society is a prudent choice to provide a suitable nomination. Without this fall-back position, the expert resolution process could be stifled by a failure to agree. Aurizon Network supported these changes to the 2017 DAU.[1328]

[1323] Aurizon Network, sub. 1: 80.
[1324] Aurizon Network, sub. 1: 80.
[1325] QRC, sub. 20: 33.
[1326] QRC, sub. 20, Annexure 2: cl. 11.1.4.
[1327] Aurizon Network, sub. 40: 327.
[1328] Aurizon Network, sub. 40: 327.

Expert decisions

As is the case for disputes referred to the QCA for determination, we consider that it is appropriate and in the interests of all parties that there is certainty as to the binding nature of the expert determination process (ss. 138(2)(b), (e) and (h)). To ensure all parties are bound by the outcome of the expert determination (subject to the limitations in cl 11.1.6(b) of the 2017 DAU), we consider it appropriate to amend cl. 11.1.4 to require the parties to agree, in a legally binding way, to be bound by the expert determination. The parties should also agree as to how the costs and disbursements of the expert determination are to be paid. Unless agreed otherwise, cl. 11.4.1(i) establishes the default position. To ensure the determination process is not stifled, the parties should be required to act reasonably and in good faith to reach agreement as soon as reasonably practicable.

Aurizon Network said that expert determinations should be required to be made within the confines of Part 5, Division 5 of the QCA Act.[1329] It also said that it did not support the requirement for parties to agree to be bound by the outcome of an expert determination, including as to costs, for a dispute that is not an access dispute under the QCA Act, except to the extent Aurizon Network volunteers to engage in a dispute process that does not involve an access seeker.[1330] Aurizon Network also said that an expert's decision must not be inconsistent with Aurizon Network's safety management system and applicable safety legislation.[1331]

The QRC said that the requirements and procedures for a QCA determination under the QCA Act were never intended to apply to an expert determination, nor is it appropriate for those requirements and procedures to be imposed in such a way.[1332] It did state that it would be willing to consider the amendments in relation to consistency with safety matters if the rest of Part 11 is reinstated as it is under the 2016 Undertaking.[1333]

As discussed in section 21.2, in accordance with the factors in s. 138(2) of the QCA Act, we consider it is not appropriate to limit the matters that may be disputed to only access disputes for the purposes of Part 5, Division 5 of the QCA Act. Furthermore, we consider the obligations on the QCA when it is determining disputes under the QCA Act are not appropriate for the resolution of disputes by an expert. Expert determinations by nature are confined to a narrow and specific subject matter. The QCA Act requirements are drafted specifically to apply to the QCA when making determinations under that Act.

Further, we accept the inclusion under Aurizon Network's 2017 DAU that the expert's decision must not be inconsistent with the undertaking and the expert must have regard to the matters specified in s. 120 of the QCA Act. To otherwise incorporate the arbitration framework into an expert's determination process is likely to inappropriately constrain the expert's decision and weigh it down with procedural matters.

The QCA, at this time, also considers it appropriate to include the requirement for an expert to not make a determination that is inconsistent with Aurizon Network’s safety management system or Aurizon Network’s obligations arising under applicable safety or environmental legislation. However, we will monitor the operation of this requirement during the term of the approved UT5 undertaking and may consider alternative arrangements in future, should it have an inappropriate impact on the dispute resolution process in future.

[1329] Aurizon Network, sub. 1: 80.
[1330] Aurizon Network, sub. 40: 327–328.
[1331] Aurizon Network, sub. 1: 80 and Appendix P.1: 19.
[1332] QRC, sub. 20: 33.
[1333] QRC, sub. 20: 33.

For these reasons, the QCA does not consider it appropriate to approve Aurizon Network's proposal and requires Aurizon Network to amend the 2017 DAU in the way set out in Appendix H.

21.5.3 Procedural matters

Aurizon Network proposed a mechanism for the QCA to determine whether or not the expert has complied with cl. 11.1.4(e) (see cl. 11.1.4(h)).[1334] The QCA considers it is appropriate to approve the proposal.

The QCA does not approve Part 11 of Aurizon Network's 2017 DAU not having a clause that provides for matters that are specific to a dispute arising under Part 8 to prevail over the provisions of Part 11 to the extent of any inconsistency. Part 8 sets out certain requirements in relation to disputes about expansions. It is important to clarify that these provisions will not be hindered due to any inconsistency with Part 11. This will provide for more efficient resolution of Part 8 disputes and avoid unnecessary arguments about process, which the QCA considers to be in the interests of parties to a dispute. Aurizon Network indicated support for this amendment, although subject to its view that the QCA can only determine access disputes as set out in Part 5, Division 5 of the QCA Act.[1335]

[1334] Aurizon Network, sub. 1, Appendix P.1: 20.
[1335] Aurizon Network, sub. 40: 328.

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