QRC submission

QCA draft decision
Aurizon Network 2017 DAU

March 2018

QUEENSLAND
resources
COUNCIL

Resourcing Queensland's future

12 March 2018

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Queensland Competition Authourity
Level 27, 145 Ann Street
Brisbane QLD 4001
(submitted via QCA Online Submission Form)

Dear Mr ~~Millsteed~~ Charles,

The Queensland Resources Council (QRC) is pleased to provide this submission on the Queensland Competition Authority's (QCA) Draft Decision on the 2017 DAU (Draft Decision) on behalf of our Rail Working Group members.

QRC generally supports the Draft Decision and agrees that it is not appropriate to approve the 2017 DAU. This does not mean that QRC is satisfied with each element of the Draft Decision, but rather, QRC understands that the QCA must balance a range of competing considerations and that a balanced decision will require all stakeholders to accept a level of compromise.

QRC encourages the QCA to make a final decision which is consistent with the Draft Decision, except to the extent that amendments are required to rectify an error in the Draft Decision or to the extent new information has been presented to justify a move away from the QCA's draft position.

Aurizon Network has recently undertaken a series of unprecedented actions which deliberately limit the throughput of the Central Queensland coal network. These actions could not have been foreseen by the QCA or by any stakeholder. As such, the draft decision does not adequately deal with this behaviour. This is new information which was unavailable to stakeholders at the time of preparing submissions on the draft decision. Substantial changes are required to the Draft Decision in order to provide an appropriate undertaking, in light of this new information.

Thank you again for the opportunity to provide a submission. Please note that the attached submission is not confidential and the QCA is welcome to publish it on your website. If you have any questions or would like any further details, the best contact at QRC is Andrew Barger on 3316 2502 or andrewb@qrc.org.au

Yours sincerely

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Executive summary

Introduction

The Queensland Resources Council (**QRC**) is pleased to provide this submission on the QCA's Draft Decision on the 2017 DAU (**Draft Decision**). The QRC's Rail Working Group has participated in the development of this submission.[1]

The QRC generally supports the Draft Decision and agrees that it is not appropriate to approve the 2017 DAU. This does not mean that the QRC is satisfied with each element of the Draft Decision. Rather, the QRC understands that the QCA must balance a range of competing considerations and that a balanced decision will require all stakeholders to accept a level of compromise.

We encourage the QCA to make a final decision which is consistent with the Draft Decision, except to the extent that amendments are required to rectify an error in the Draft Decision or to the extent new information has been presented to justify a move away from the QCA's draft position.

The QCA's Draft Decision proposes substantial changes to the 2017 DAU, which are necessary to achieve an undertaking consistent with section 69E and section 138 of the QCA Act. This includes substantial changes to the Maximum Allowable Revenues (**MAR**). The proposed changes to the MAR are required to ensure that costs are efficient and that the returns being earned by Aurizon Network are commensurate with the risks involved and do not include monopoly profits which would impact on the competitiveness of the Queensland coal industry.

Aurizon Network's actions to limit throughput

Aurizon Network has recently undertaken a series of unprecedented actions which deliberately limit the throughput of the Central Queensland Coal Network (**CQCN**). These actions could not have been foreseen by the QCA or by any stakeholder. As such, the draft UT5 does not adequately deal with this behaviour. This is new information which was unavailable to stakeholders at the time of preparing submissions on the DAU, and was unavailable to the QCA when preparing the Draft Decision. Substantial changes are required to the DAU in order to provide an appropriate undertaking, in light of this new information.

A revised DAU should:

- deny Aurizon Network recovery of all revenue lost as a result of the throughput restrictions; or
- reduce RAB, operating and maintenance allowances to reflect only the portion of capacity which genuinely remains available to customers; and
- impose stronger, clearer obligations on Aurizon Network to efficiently maintain and operate the network and to provide contracted capacity.

[1] The Rail Working Group (**RWG**) comprises most of QRC's coal members, and is open to all. Most RWG members have confirmed their support for this submission. The remainder participated in the development of this submission but have not completed internal review and sign-off processes as at the date of the submission.

Structure of submission

This submission is structured to align with the section headings used in the Draft Decision.

Key issues identified

A non-exhaustive selection of some of the key issues identified in this submission are set out below:

- **Sections 2 and 5:** The Draft Decision contains a comprehensive and balanced analysis of the risks inherent in Aurizon Network's investment in, and management of, the CQCN. The Weighted Average Cost of Capital proposed in the Draft Decision appropriately reflects this risk profile, is consistent with relevant regulatory precedents, and is conservative (in favour of Aurizon Network) in a number of areas.
- **Sections 3, 7 and 8:** Non-coal services consume significant capacity, and this should be reflected in an allocation of the RAB, maintenance costs and a greater proportion of operating costs to such services.
- **Section 4:** QRC prefers the continued adoption of the mid-point of the RBA's inflation target as the forecast inflation rate (2.5%). However, we understand the QCA's desire to adopt the best available forecast, and accept the alternative approach set out in the Draft Decision (RBA forecasts where available, with reference to the target band for the remainder of the period). This approach avoids the inflation bias and liquidity bias which are inherent in Aurizon Network's breakeven method.
- **Section 10:** The undertaking requires amendments to deal with situations in which Aurizon Network deliberately withholds or restricts access. The current undertaking prevents Aurizon Network from recovering the access revenue lost as a result of such actions, but this relies on breaches of individual access agreements and is subject to a minimum threshold. This should be replaced by a more mechanistic adjustment.
- **Sections 7 and 8:** The Draft Decision appears to reflect a thorough assessment of the efficient costs of operating and maintaining the CQCN. We are unable to identify any 'fundamental errors' or examples of the Draft Decision prescribing particular operating or maintenance practices. Rather, the QCA makes a range of observations regarding possible improvements in efficiency (without concluding that each of those improvements should necessarily be implemented), then makes limited and conservative (generous to Aurizon Network) adjustments to Aurizon Network's recent actual costs in the most recent available base year to estimate efficient allowances. However, we consider that further reductions in allowances should be considered. For example, we consider that the proposed allowances reflect costs which should be allocated to non-coal services or which relate to non-regulated activities.

Part A: Risk, revenues and reference tariffs

1 Risk, revenues and reference tariffs - Overview

1.1 WIRP reference tariff proposal

(a) Discontinuation of deferral of certain WIRP Blackwater revenues

Aurizon Network has proposed to commence recovery of revenue related to 'WIRP Blackwater'[2] customers which are not expected to rail during the UT5 period (i.e. to discontinue the deferral of this revenue). The QCA's Final Decision on UT4 required the deferral of these revenues for a range of reasons. We are not aware of any changes in circumstances which ought to lead to a different conclusion under UT5. In particular, we do 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.

The QCA's Draft Decision is to accept Aurizon Network's proposal to discontinue this revenue deferral. The relevant revenue would be recovered from WIRP users who are railing during the UT5 period. This also has an impact on 'Existing Blackwater'[3] customers, because the WIRP Blackwater costs are socialised with these customers. That is, the contribution to common costs arising from the socialisation of WIRP Blackwater with Existing Blackwater is lower than would be the case if the deferral continued (but is still a positive contribution).

Despite our continuing concerns, we accept the QCA's Draft Decision on this issue. We note that this 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.

(b) Allocation of costs between WIRP users

The Draft Decision (section 1.5.1) states that "in the absence of stakeholder comments on this issue, the QCA is minded to accept Aurizon Network's proposal of allocating costs as between WIRP users" and "the QCA notes that an alternative approach could be identified to produce a more equitable outcome". The QCA has not elaborated on any perceived inequities presented by Aurizon Network's approach, however, we note that:

- The proposal results in the Rolleston mine paying a significant system premium. To some extent, this premium is caused by Rolleston bearing the costs of WIRP Blackwater users who are not railing during the UT5 period.
- Existing Blackwater users will pay lower non-electric charges due to the existence of WIRP. This is due to the socialisation of WIRP Blackwater with Existing Blackwater, where WIRP Blackwater has a lower incremental cost than the existing system reference tariff.
- Existing Blackwater users will pay lower electric charges due to the existence of WIRP and the Rolleston electrification. This is due to the socialisation of WIRP Blackwater electric costs and WIRP Rolleston electric costs with Existing Blackwater electric costs, where WIRP Blackwater and Rolleston have a lower incremental electric cost than the existing system reference tariff.

[2] Customers who have contracted Train Services under WIRP arrangements and are geographically located in the Blackwater System (excluding WIRP Rolleston).

[3] Customers geographically located in the Blackwater System, who have not contracted Train Services under WIRP arrangements.

As a general rule, QRC considers that existing users should not be required to pay more as a result of an expansion (except to the extent that they receive clear benefits). System premiums are applied to expanding users, where necessary, to achieve this result. However, under the current allocation methodology, system premiums are being applied to Rolleston to prevent existing users from being worse off, yet those users are actually made better off. 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.

The QRC expects that individual producers may have a range of views on this issue, and are likely to make individual submissions to the QCA.

2 Risk and the Regulatory framework

The QRC notes two fundamental errors in the submissions made by Aurizon Network with respect to the nature of the risks it faces and how it considers these should be approached by the QCA. These are:

- First, Aurizon Network argues that recent price instability in the global coal market should be seen as reflective of heightened cashflow and asset risk for its regulated network, and ought therefore to be reflected in a higher rate of return.
- Second, Aurizon Network argues that the approach adopted by the QCA to assess risk and the rate of return should principally be based on the perspectives and expectations of existing shareholders and credit rating agencies. To the extent that the QCA undertakes its own first principles assessment of risk and rate of return, Aurizon Network submits that the 'overall' WACC outcome should only be viewed as reasonable or appropriate if it satisfies the expectations of these stakeholders – as interpreted by Aurizon Network.

The QCA has, rightly, rejected both of these arguments as unsupported by evidence and, in the case of the second argument, as being inconsistent with the QCA's task under the QCA Act.

We set out below and in Chapter 5 of this response more detailed submissions in relation to both issues.

2.1 Aurizon Network's risk position and the global coal market

Section 2 of the Draft Decision contains a comprehensive analysis of the risks inherent in Aurizon Network's investment in, and management of, the CQCN. The QCA's analysis demonstrates the extent of risk mitigation provided to Aurizon Network under the regulatory framework, and the very limited extent to which Aurizon Network remains exposed to risks beyond its control.

Aurizon Network has been extremely successful in identifying risks and introducing additional risk mitigation mechanisms into successive undertakings. This has included the introduction of the revenue cap mechanism, removal of any obligation to invest in expansion projects, strengthening of take or pay, acceleration of depreciation and the introduction of a range of additional review and variation mechanisms. Furthermore, where specific risks or concerns do arise throughout the regulatory period, Aurizon Network is free to bring a DAAU to the QCA at any time. The result is a network business which provides secure long term cashflows with limited exposure to risk, including risks related to Aurizon Network's own performance.

We note the QCA's comment that "the QCA is open to considering proposals from Aurizon Network which would increase its exposure to risk that would justify an increase in the appropriate regulatory rate of return" (Draft Decision 2.1). The QRC is also open to considering such proposals. Until such proposals are developed and approved, Aurizon Network's WACC must continue to reflect the very limited exposure to risk which is inherent in the current arrangements.

Aurizon Network's submission makes much of the downturn in coal prices which was experienced between 2012-2016. The QRC considers that this downturn provided an excellent test of the extent to which Aurizon Network is exposed to volatility in the market in which its customers operate. Many of Aurizon Network's customers were operating on negative cashflows during this period. Some customers closed mines, while some entered voluntary administration. Despite these severe impacts on customers, Aurizon Network experienced continued growth in railings. It is also important to note that, had a reduction in railings occurred, Aurizon Network's returns would remain protected by regulatory mechanisms including long term contracts with take or pay arrangements, socialisation of revenue recoveries (system tariffs) and the revenue cap. The QCA is correct in its view that "the risks facing individual customers of Aurizon Network 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".[4]

Far from demonstrating any additional or increased risk faced by Aurizon Network, as claimed, the QRC therefore submits that the experience over recent years during a period of volatility in the global coal price provides clear evidence of the high degree to which Aurizon Network is insulated from such risks by the regulatory framework.

The QRC accepts that Aurizon Network's exposure to risk in the long term is determined by the demand for coal and the competitiveness of the central Queensland coal industry. The long-term demand outlook for Queensland coal does not indicate that Aurizon Network faces a material risk within the foreseeable future. We agree with RMI's conclusion that "long-term seaborn 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".[5] We also agree with Aurizon Network's expectation that "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 competitiveness, proximity to end markets and access to reliable world class infrastructure".[6] Similarly, in Aurizon Network's most recent Sustainability report, it noted: "Aurizon holds the view that high quality metallurgical and thermal coal supplied by Australia will continue to be robust against a backdrop of increasing demand from Asian nations."[7]

2.2 Risk and the statutory framework

From a statutory perspective, the importance of risk is most directly raised in the context of the required rate of return. Under the pricing principles in section 168A, the price for a declared service should be expected to generate revenue that includes "a return on investment commensurate with the regulatory and commercial risks involved". The QRC agrees that, in this regard, the QCA is required to assess and consider the risks faced by Aurizon Network and determine a commensurate rate of return.

However, Aurizon Network's view of this task suggests that the QCA should view these matters "from the perspective of investors and ratings agencies"[8] and must "satisfy the expectations of its existing shareholders."[9] In doing so, Aurizon Network argues that investors take a "practical, commercial approach in forming their return expectations" with an emphasis on "the overall return" rather than parameter estimates. Aurizon Network seeks to narrow the manner in which the QCA approaches its regulatory task.

Put simply, Aurizon Network demands that the QCA accepts Aurizon Network's claims as to what current shareholders and credit rating agencies would prefer, and then reverse engineer an 'overall' WACC outcome that satisfies them.

When stripped to its essence, it is clear that such an interpretation of the QCA's statutory task is both wrong and would involve a misconstruction of the requirements of sections 138(2) and 168A. It would not be appropriate for the QCA to accept that its role was focused myopically on meeting the expectations of a single set of market participants (current Aurizon Network investors and credit agencies). Indeed, such an approach inverts the proper inquiry under Part 5 of the QCA Act.

The QCA is required to consider and assess the regulatory and commercial risks faced by Aurizon Network based on the evidence before it. The QCA should then consider and determine the return that is commensurate with those risks, informed by the techniques and methodologies applied by

[4] Draft Decision 2.2.1.

[5] Draft Decision 2.2.2.

[6] Aurizon Network DAU submission, section 1.3.2.

[7] Aurizon Sustainability Report 2017 at page 23.

[8] Aurizon Network Submission 2017 DAU at page 9.

[9] Aurizon Network Submission 2017 DAU at page 254.

the QCA and other economic regulators in Australia over a large number of years. In undertaking this assessment, the QCA should not treat as determinative, or give primacy to, the claimed views of existing shareholders or credit rating agencies – especially (as in this case) where those views are as interpreted and intermediated by Aurizon Network itself.

Rather, the QRC supports the approach adopted by the QCA in the Draft Decision – which undertakes a first principles assessment of the risks faced and the return that is commensurate with those risks. This orthodox approach properly recognises the relationship between the level of risk faced by the service provider (and the impact of regulation on risk) and the level of return. While the objective is clearly to promote efficient investment, and while the legitimate interests of Aurizon Network and its current shareholders may be a relevant consideration, the regulator's assessment should not be driven to delivering an outcome that is 'acceptable to shareholders'. Rather, the QCA's approach should seek to balance all of the factors to which it is required to have regard to under Part 5 of the QCA Act.

As noted in section 5, the approach proposed by Aurizon Network also suffers from a number of other fundamental difficulties, including:

- The approach of focusing on the expectations of shareholders in the Aurizon Group fails to recognise that throughout the period since privatisation, Aurizon Network has been subject to access regulation by the QCA and the statutory and regulatory task has not changed materially since that time. Indeed, consistent with the High Court's approach in other regulated industries, QCA-regulated oversight of prices forms part of the 'bundle of rights' that Aurizon's shareholders accepted when investing in the company.[10]
- Moreover, the shareholders in question have acquired an interest in a diversified Group comprising regulated and unregulated business activities. It should not be assumed that their expectations align with those of an investor of a solely regulated business. Moreover, it would be a fraught (and, we submit, inappropriate) exercise for the QCA to now seek to reverse engineer or divine what their expectations may be regarding a reasonable return for the regulated part of the Aurizon business.
- The weak evidentiary basis for Aurizon's approach is further apparent in their late submission, in which they seek to rely upon an interpretation by Deloitte of highly questionable survey evidence obtained from unnamed investment bankers as the basis for establishing investor expectations. No detail on the study has been provided for testing or verification – and some of the claims made to justify the findings are clearly wrong.[11]
- The changes and 'adjustments' proposed by Aurizon Network to respond to the expectations of shareholders and credit agencies are significant, unorthodox and unsound. We explore these errors more in section 5.

The fundamental basis of Aurizon Network's complaint is also flawed – given that the ultimate decision of the QCA is conservative in a number of respects and aligns with recent decisions by other economic regulators across a number of markets. Indeed, the kind of orthodox economic analysis undertaken by the QCA has supported substantial investment across a number of sectors, including the energy market (where there are now concerns that, if anything, the traditional approach to estimating the rate of return may have been overly generous and led to 'gold plating' and over-investment).

[10] *Telstra Corporation v Commonwealth* [2008] HCA 7 at [52].

[11] For example, the statement is made at page 9 of the Deloitte Report that the Aurizon Network regulatory framework is 'less mature' than energy market frameworks. The Aurizon Network undertakings, in fact, substantially pre-date the National Electricity Rules and National Gas Rules and the Post Tax Revenue Model applied by the AER for electricity distribution and transmission network revenue decisions. Indeed, the QCA Act and the CQCN access undertaking regime is one of Australia's longest serving regulatory models.

3 The Regulatory asset base and depreciation

QRC relies on the QCA to ensure that the calculation and roll-forward of the RAB is undertaken correctly based on the terms of the relevant undertakings. Comments on specific issues are provided below.

3.1 Capacity sterilised by Aurizon Network's UT5 campaign

Aurizon Network is implementing a range of operating practices and business decisions which it estimates will reduce capacity in the CQCN by 20mt initially, with further impacts possible. These actions are unnecessary and are not, as Aurizon Network claims, 'prescribed' by the QCA (nor is there a draft decision to prescribe these practices).

The RAB reflects the cost of a network designed to provide sufficient capacity to deliver 100% of contracted train paths. Aurizon Network suggests that its new operating practices will reduce expected throughput by at least 20mtpa (around 10% of FY2017 railings). Expected throughput (whether based on Aurizon Network's forecasts, or the QCA's), prior to these actions, was significantly below contracted throughput. Therefore, the capacity which is being made available to access holders falls short of contracted capacity by far more than 20mtpa. Access holders are denied:

- the ability to rail at least 20mtpa, which Aurizon Network notes is only the first stage of impacts; and
- the ability to increase railings above current levels, moving closer to contracted levels (as is reflected in the UT5 forecasts, particularly as proposed by the QCA).

The QRC considers that Aurizon Network should not receive revenue relating to the capital costs (return on capital or depreciation) of the capacity which is sterilised (withheld from productive use) by Aurizon Network's campaign. Similarly, fixed maintenance and operating costs relating to the portion of capacity which is being made unavailable should not be recovered. This could be achieved by:

- allowing, in the MAR, only the capital charges, operating and maintenance costs that relate to the portion of capacity which is being made available; or
- maintaining a full MAR and volume forecasts which reflect expectations in the absence of the throughput restrictions, but ensuring that the revenue cap mechanisms do not allow Aurizon Network to recover the shortfall arising from its actions. Achieving this would require consideration of how UT5 would interact with existing Access Agreements.

The QRC has suggested various approaches throughout this submission, some of which may overlap. We rely on the QCA to determine an appropriate arrangement which ensures that costs passed to customers reflect only the efficient cost of the useable train paths which Aurizon Network makes available, and do not reflect the capital, operating or maintenance costs of capacity which Aurizon Network has elected to withhold.

3.2 Non-coal services

The QRC requests that the QCA reviews the allocation of the RAB, operating costs and maintenance costs to assess the extent to which costs ought to be allocated to non-coal services. We note the conclusions which the QCA has reached in regard to Queensland Rail's West Moreton System in this regard, which include:

- allocation of a portion of the RAB to non-coal services to reflect the portion of train paths which are not available for contracting by coal services;
- allocation of a portion of fixed operating costs and fixed maintenance costs to non-coal services, based on the portion of capacity reserved for these services (and regardless of whether this capacity is actually used by non-coal services); and
- allocation of variable operating and maintenance costs to non-coal services based on their proportion of total usage.

At the time of its QR 2015 DAU final decision, the QCA said its:

> approach to make coal traffics pay the efficient fixed common network costs that reflect the proportion of capacity they are able to contract, and no more, balances the interests of all parties and is appropriate having regard to the assessment criteria in section 138(2) of the QCA Act.[12]

Furthermore, the QCA noted:

> our view is that the relevant consideration is whether the constraint is, and will continue to be, binding after the approval date (i.e. whether it applies in practice, regardless of whether it is legally binding), which is the key concern of users and the matter that is relevant to the QCA in determining how common network costs should be allocated.[13]

We suggest that a similar approach should be considered where paths are used by, or reserved for, non-coal services.

The following table shows the impact of paths being reserved for non-coal services in the Blackwater system during February of this year (data obtained from Aurizon Network website: Master Train Plan).

Blackwater system: Loaded path availability

Week commencing	29-Jan	5-Feb	12-Feb	19-Feb
Total paths	504	504	504	504
Maintenance	178	101	238	184
Available	326	403	266	320
Non-coal	84	113	86	92
Available for coal	242	290	180	228
% of available paths allocated to coal	74%	72%	68%	71%

Our understanding is that:

- the impacts shown above are typical for the Blackwater System;
- around 20% of total paths (not available paths) are sterilised for freight and passenger services;
- due to the priority given to these services, the percentage of available paths which are sterilised by non-coal services (after allowing for maintenance) is even higher;
- in the current situation, in which Aurizon Network is taking actions which increase the paths lost due to maintenance, the impact will fall almost exclusively on coal services, due to the priority given to non-coal services; and
- passenger services enjoy a further level of priority, in that, if a passenger service is late or needs to be rescheduled, priority is given to accommodating the needs of that service over scheduled coal services.

Coal customers appear to receive a second-class entitlement to train paths, yet appear to bear the entire cost of the RAB (other than the portion of the North Coast line which has been excluded from the RAB since declaration).

[12] QCA Final Decision on Queensland Rail's 2015 DAU at page 143.

[13] QCA Final Decision on Queensland Rail's 2015 DAU at page 124.

3.3 WIRP Deferrals

The QRC's views on Aurizon Network's proposal to discontinue the deferral of certain WIRP Blackwater revenues are provided in Section 1.1(a).

3.4 Incentive-based approach to renewals

The QRC notes the QCA's suggestions regarding the possible development of an incentive-based approach to renewals expenditure, in which, following a full ex-ante assessment and approval of projects, Aurizon Network would, within the period of an undertaking, retain savings against the approved renewals budget (and vice versa if costs exceeded budgets). The QRC is open to considering such an arrangement. Key issues to be addressed would be 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.

4 Inflation forecast and RAB indexation

4.1 Forecasting inflation

The QRC has previously supported the continued adoption of the mid-point of the RBA's inflation target (currently 2.5%) as the forecast inflation rate. As was noted by the QCA, the average inflation rate since inflation targeting commenced in 1993 has been 2.53%.[14] We note that the QCA's Draft Decision regarding indexation of the asset base, which favours indexation at the forecast inflation rate, rather than at an actual rate, ensures that variances between forecast and actual inflation do not create any mismatch, and remain NPV neutral. Given these considerations, we continue to favour the simplicity of the 2.5% forecast inflation rate.

However, we understand the QCA's desire to adopt a rate of inflation which represents the best available forecast, and accept the Draft Decision to adopt the mean of the RBA's short-term forecasts, where they are available, while retaining reference to the target band for the years in which RBA forecasts are not available. Importantly, the QCA's proposed method avoids the shortcomings of Aurizon Network's break-even method, including the inflation risk bias and liquidity bias.

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

The QRC supports the continued application of the forecast-actual approach, in which forecast inflation is used to develop reference tariffs and maximum allowable revenues, while actual inflation is used to index the RAB. As was noted by the QCA, use of the best available estimate of inflation for forecasting purposes (as discussed in Section 4.1) should ensure that variations between forecast and actual inflation are not significant, and offset over time (as forecasts are likely to vary from actual in both directions over time). Therefore, the forecast-actual approach will broadly satisfy the NPV=0 principle. The forecast-actual approach also has the advantage of maintaining the real value of the RAB over time.

Despite these observations, the Draft Decision accepts Aurizon Network's proposal to depart from existing practice, and to adopt a forecast-forecast approach. Aurizon Network's proposal is consistent with Aurizon Network's approach to each successive undertaking, which involves the systematic identification and elimination of risks – in this case, the risk that actual inflation will be lower than forecast inflation.

The QRC does not have any fundamental objection to the forecast-forecast approach. We do however object to the constant revision of the regulatory arrangements for the purpose of further reducing Aurizon Network's claimed risks.

For completeness, we do not support the third approach discussed in the Draft Decision, being the actual-actual approach. This would involve a further true-up calculation being added to the growing

[14] Draft Decision 4.1.1.

list of true-ups which are designed to eliminate Aurizon Network risks. We see no benefit in adding this further complexity to the regulatory arrangements.

5 Rate of return

5.1 The QCA's task

Section 2 of the Draft Decision contains a comprehensive analysis of the risks related to Aurizon Network's investment in, and management of, the CQCN. The QCA's analysis demonstrates the extent of risk mitigation provided to Aurizon Network under the regulatory framework, and the very limited extent to which Aurizon Network remains exposed to risks beyond its control. QRC's comments on Risk and the Regulatory Framework are provided in Section 2 of this submission.

Evidently, the risk environment has direct implications for the rate of return. Aurizon Network should only be compensated through the rate of return for the regulatory and commercial risks involved in providing access to the CQCN.[15]

In its proposal, Aurizon Network submitted that in applying the objective of Part 5 (section 69E), the statutory criteria in section 138(2) and the pricing principles (section 168A), the QCA should view these matters "from the perspective of investors and ratings agencies"[16] and must "satisfy the expectations of its existing shareholders."[17] In doing so, Aurizon Network argued that investors take a "practical, commercial approach in forming their return expectations" with an emphasis on "the overall return" rather than parameter estimates.

In saying this, Aurizon Network appeared to suggest that the QCA should accept or adopt an approach to its task that is satisfied with reverse engineering an 'overall' rate of return outcome that is acceptable based on Aurizon Network's assessment of investors' current expectations and those of credit rating agencies. It then proceeded to demonstrate how such an 'overall' acceptable outcome could be reached through a range of unorthodox adjustments to the approach which has been adopted by the QCA and other Australian regulators across a range of regulated industries for many years, and which has proven to support continued (and increased) investment in those industries and assets.

The QRC notes, for example, that the QCA's approach to estimating the rate of return is broadly consistent with the approach adopted by the AER for energy network businesses – and that this approach has supported strong investment in electricity networks and gas pipelines over the past decade. If anything, there has recently been concern around over-investment (including public comments by the ACCC and others about 'gold plating' by energy networks), and certainly not under-investment, in energy network infrastructure.

The AER has estimated that, under the first round of network price determinations that it made between 2007 and 2011, it approved over $55 billion in operating and capital expenditure. The AER also observed that several businesses had spent significantly more in the prior period than had been allowed for in the regulatory determinations for that prior period – resulting in expansion of their regulatory asset base values. The AER has noted that, while there may be legitimate reasons for some increases in expenditure from previous levels, the sharp and significant step change in expenditure in the period from 2007 to around 2012 draws into question whether the framework is promoting efficient investment, or whether it is stimulating investment above efficient levels. Partly in response to concerns around over-investment by network service providers, the AER proposed changes to the National Electricity Rules and National Gas Rules directed at giving it greater discretion in assessment of the rate of return and expenditure forecasts.[18]

[15] See pricing principle at section 168A of the QCA Act.

[16] Aurizon Network Submission 2017 DAU at page 9.

[17] Aurizon Network Submission 2017 DAU at page 254.

[18] *See: AER, Rule change proposal: Economic regulation of transmission and distribution network service providers – AER's proposed changes to the National Electricity Rules, September 2011, particularly section 2.3.*

There are a number of practical and legal problems with the approach proposed by Aurizon Network:

- **The adjustments proposed are themselves unsound.** The QCA has correctly identified a number of fundamental difficulties with the adjustments proposed by Aurizon Network. The QRC shares those concerns, and sets out additional problems with the approach in this section.
- **Aurizon Network's submission is based on wrong assumptions rather than evidence.** Aurizon Network repeatedly refers to 'shareholders' as though (a) they are investors in Aurizon Network; and (b) their expectations can be accurately determined. In fact, neither is the case. First, Aurizon Network in its submission is clearly referring to shareholders of Aurizon Holdings, which is the ASX listed entity and which operates a diversified business containing regulated and unregulated activities.[19] There is no reason to assume that a shareholder in Aurizon Holdings has the same expectations as an investor in a solely regulated network business. To the extent that Aurizon Network tries to overcome this evidentiary failure through its late evidence containing a report from Deloitte, the further report simply serves to highlight the lack of a credible basis for determining the expectations of investors through such qualitative processes. The Deloitte report offers highly questionable survey evidence obtained from unnamed investment bankers who offer their view of what return 'investors' expect. No detail on the study has been provided for testing or verification – and some of the claims made to justify the findings are themselves clearly wrong.[20] This merely further demonstrates the need for the QCA to maintain its orthodox, rigorous 'first principles' approach to assessing risk and return, rather than adopting unsound assumptions.
- **Aurizon Network's submission ignores history.** Aurizon Network has been subject to revenue regulation by the QCA throughout its history. Investors in Aurizon Holdings today have been aware of the approach adopted by the QCA throughout this period. It is therefore unclear why current investor expectations would justify a radical departure from the careful and balanced regulatory approach which the QCA has adopted to its pricing determinations to date. Indeed, consistent with the High Court's approach in other regulated industries, QCA-regulated oversight of prices (rather than having such decisions 'outsourced' to private investor or credit agency expectations) forms part of the 'bundle of rights' that Aurizon Holdings shareholders have accepted when acquiring shares.[21]
- **Aurizon Network's proposed approach is legally unsound.** It would not be appropriate for the QCA to accept that its role was focused myopically on meeting the expectations of a single set of market participants (Aurizon Network investors and credit agencies). This would evidently lead to upwardly biased estimates of the rate of return, since investors would be likely to increase their view of their 'required' return if they knew that this would be reflected in the regulatory allowance. Contrary to Aurizon Network's proposed approach, the statutory criteria make clear that the QCA's task is to have regard to a number of perspectives, including the legitimate interests of Aurizon Network, users and the broader public interest.
- **Aurizon Network's submission is misguided**, given that the QCA has been conservative and generous to Aurizon Network by reference to other recent regulatory outcomes. The QRC notes that the overall rate of return in the Draft Decision is broadly in line with recent regulatory decisions for comparable businesses. Indeed, when the outcomes of recent regulatory decisions are adjusted to account for differences in the risk-free rate and cost of debt, the Draft Decision outcome is higher than the allowed rate of return for comparable businesses in these recent decisions (see Figure 1 below). The rate of return allowed in these recent decisions has generally been around 5% when adjusted in this manner, compared to the QCA's 5.41%.

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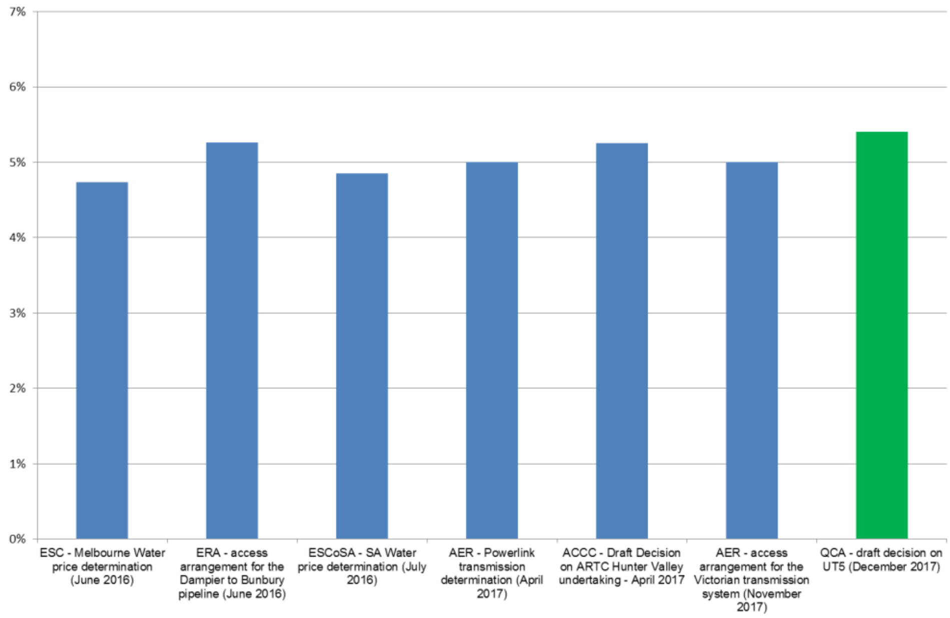
[19] See for example, references to shareholders of the Group and ASX listing at pages 220 and 224.

[20] For example, the statement is made at page 9 of the Deloitte Report that the Aurizon Network regulatory framework is 'less mature' than energy market frameworks. The Aurizon Network undertakings, in fact, substantially pre-date the National Electricity Rules and National Gas Rules and the Post Tax Revenue Model applied by the AER for electricity distribution and transmission network revenue decisions. Indeed, the QCA Act and the CQCN access undertaking regime is one of Australia's longest serving regulatory models.

[21] *Telstra Corporation v Commonwealth* [2008] HCA 7 at [52].

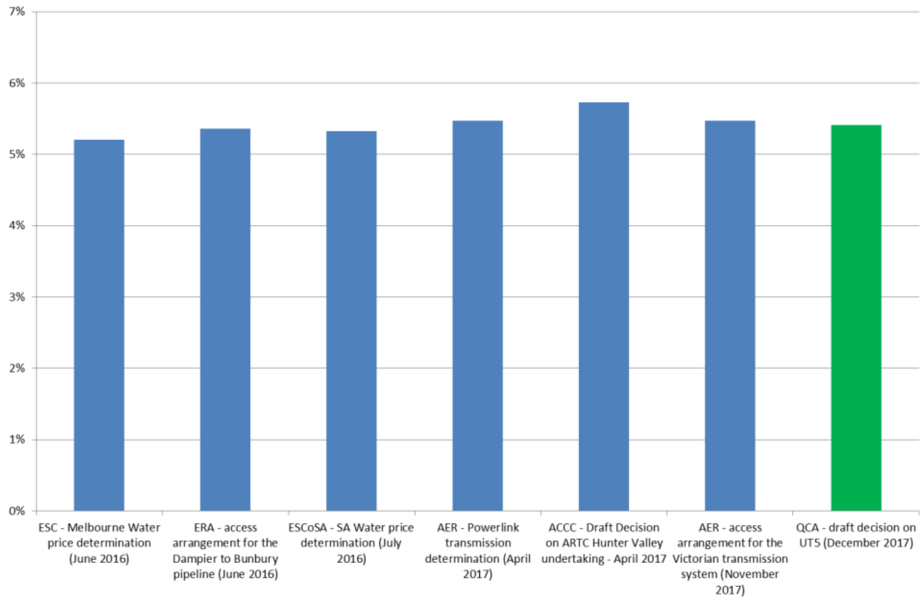
The comparisons shown in Figure 1 use the same risk-free rate and cost of debt values as those used in the QCA's Draft Decision. The comparison also controls for differences in gearing, by de-levering and re-levering the equity beta based on Aurizon Network's assumed gearing (55%).

Figure 1: Comparison of recent rate of return outcomes for comparable regulated businesses, adjusted for differences in risk free rate, debt margin and gearing.



For completeness, and to acknowledge that regulators adopt different methodologies for the development of the risk-free rate and debt margin, Figure 2 adjusts the risk-free rates and debt margins of each decision for variations in the measurement period of the decisions only, by using the same measurement period for all businesses (the 20 business days ending 30 June 2017). Therefore, the different approaches of each regulator to individual parameters are reflected in the comparison – for example the AER and ACCC data points reflect the fact that those regulators use a 10-year risk-free rate (as well as different estimates of the MRP, beta, etc.). The comparison continues to control for differences in gearing.

Figure 2: Comparison of recent rate of return outcomes for comparable regulated businesses, adjusted for differences in measurement period and gearing.



The QCA's Draft Decision WACC of 5.41% is the median WACC of these entities, while the average is 5.42%.

The QRC submits that the QCA is correct to view its task under section 168A and 138(2) as having regard to the range of factors in section 138(2), including the need to set a price that reflects efficient costs and includes a return commensurate with the regulatory and commercial risks involved. The QCA (and other regulators across a number of sectors) have developed a well-understood and regularly applied set of tools to analyse those risks.

Within this context, the QRC considers that the rate of return provided for in the Draft Decision is reasonably commensurate with the regulatory and commercial risks faced by Aurizon Network. If anything, the approach of the QCA on a number of parameters is conservative and generous to Aurizon Network. The Draft Decision reflects a thorough consideration of the relevant issues and evidence relevant to estimating the rate of return, and reflects a considered exercise of judgement by the QCA.

5.2 Risk-free rate

(a) Term of the risk-free rate

The QRC agrees with the Draft Decision in relation to the appropriate term of the risk-free rate. This is an issue that has been carefully considered by the QCA over a number of years. The QCA has thoroughly considered all submissions and expert advice on this matter. In the QRC's view, the QCA's judgment on this matter is not only well-considered and reasonable, it is also correct.

The expert advice to the QCA on this issue (from Professor Lally) is clear:

- that the term of the risk-free rate must match the term of the regulatory period in order to satisfy the NPV=0 principle; and
- if a different term is used for the risk-free rate, the service provider will be either over-compensated or under-compensated, relative to its efficient debt and equity financing costs.

In the present case, assuming an upward sloping yield curve, Aurizon Network would be over-compensated if a ten-year risk-free rate were to be used.

The QRC notes that the NPV=0 principle, which underpins Professor Lally's advice and the QCA's decision, is key to ensuring that the rate of return is commensurate with efficient financing costs. This has been recognised in recent decisions of the Australian Competition Tribunal.[22]

(b) Averaging period

Aurizon Network proposed an averaging period of 20 business days to 30 June 2017, and this was accepted by the QCA.

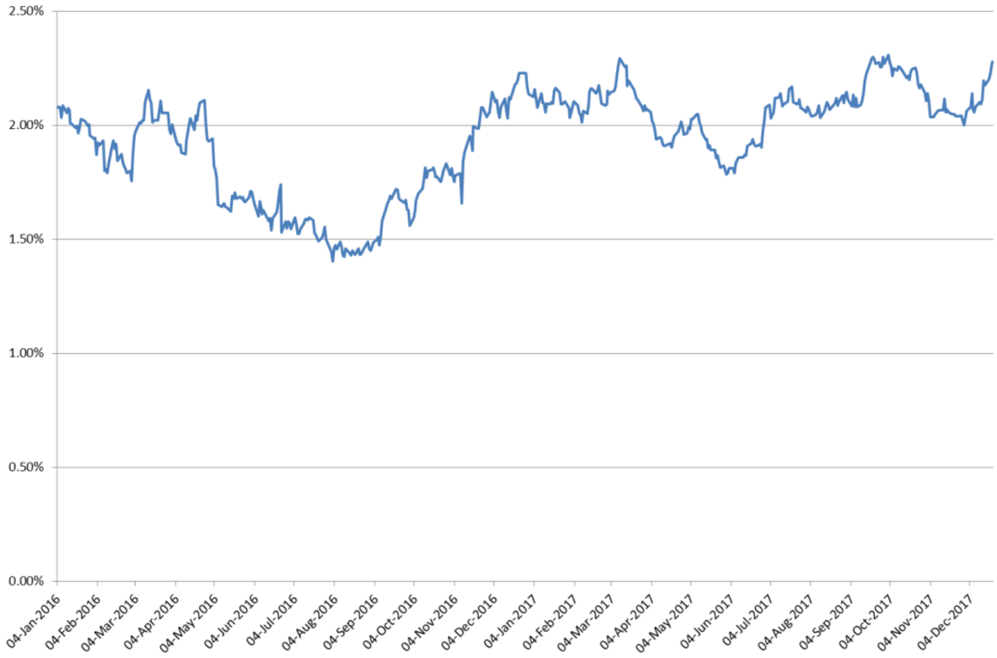
However, in a submission made after the averaging period had passed, Aurizon Network claimed that the outcome in this agreed averaging period was 'anomalous', and that this matter should be taken into account in determining the overall WACC.[23]

Aurizon Network has not provided any evidence as to 'anomalous' market conditions around June 2017. It has simply observed that yields on Commonwealth Government Securities (**CGS**) prevailing in that period were moderately lower than in the months before and after. Figure 3 below shows that there is nothing particularly anomalous occurring in June 2017 – rather, prevailing yields on 4-year CGS in June 2017 were around the average of prevailing yields over the past two years. Based on Figure 3, if June 2017 rates are to be considered an anomaly, then it is possible to identify around seven 'anomalous' periods within this two-year sample – some of which are higher, and some lower, than surrounding periods. Bond yields do fluctuate.

[22] For example: *Application by ActewAGL Distribution* [2017] ACompT 2 at [155].

[23] Aurizon Network 'new information' submission, 29 September 2017.

Figure 3: Yield on 4-year CGS, January 2016 to December 2017



Source: RBA.

To the extent that yields were somewhat lower in June 2017 than in the months before and after, Aurizon Network would have benefited from this through a lower cost of debt. The QRC notes that Aurizon Network issued $425 million in debt in June 2017, at a fixed coupon rate of 4% per annum.[24] We acknowledge that the cost of debt allowance should not be pegged to Aurizon Network's actual cost of debt – rather, it should reflect a benchmark efficient cost allowance. However, we observe that, where a service provider chooses to raise debt around the time of the agreed averaging period (as Aurizon Network has done in this case), any movement in bond yields will influence both the cost of debt and the regulatory allowance.

More importantly, as a matter of principle, Aurizon Network should not be allowed to revise its proposal in respect of the averaging period after it has passed, simply because the agreed period returns a particular result. Clearly, Aurizon Network would not have proposed to revise the averaging period if the chosen period produced yields which were higher than those of surrounding periods, nor do we expect that the QCA would have reneged on its acceptance of the pre-agreed period in such circumstances.

If Aurizon Network is allowed to revise its proposed averaging periods with the benefit of hindsight, then there will clearly be a systematic upward bias in estimates of rate of return parameters.

5.3 Market risk premium

The QRC recognises that estimation of the market risk premium (**MRP**) requires the exercise of regulatory judgement. The forward-looking MRP is not directly observable, and therefore must be estimated. It has been recognised on numerous occasions, including by the Australian Competition Tribunal (**Tribunal**), that there is no single technique or methodology which can particularly and correctly provide a figure for the forward-looking estimate of the MRP.[25] There are a range of estimation techniques available, each with strengths and weaknesses. It is therefore up to the regulator to judge what is the best estimate of the MRP, taking into account the available information from the various techniques and methodologies.

[24] 'Aurizon successfully prices A$ Medium Term Notes', 14 June 2017.

[25] For example: *Applications by Public Interest Advocacy Service Ltd and Ausgrid Distribution* [2016] ACompT 1 at [800]; *Re WA Gas Networks Pty Ltd (No 3)* [2012] ACompT 12 at [105]-[106].

The QRC also acknowledges that the QCA has carefully considered all of the available evidence in relation to the MRP. The Draft Decision reflects a careful and reasoned assessment of all of the available evidence.

However, the QRC is concerned that the QCA's estimate of the MRP in the Draft Decision gives too much weight to information from surveys / independent expert reports and the Wright approach, resulting in an MRP estimate that is highly conservative in favour of Aurizon Network. The QRC considers that, in light of current evidence, a more appropriate estimate for the MRP would be 6.5 per cent.

The QRC supports the QCA's consideration of five different forms of evidence – from the Ibbotson approach, the Siegel approach, surveys and independent expert reports, the Cornell dividend growth model (**DGM**) and the Wright approach. However, in weighing up the evidence from these methodologies, the relative strengths and weaknesses of each one need to be taken into account. In this regard, the weaknesses of survey evidence and the Wright approach are well recognised.

In relation to survey evidence, it is well recognised that results need to be treated with great caution. The Tribunal has noted that, in relying on survey results, consideration must be given at least to the types of questions asked, the wording of those questions, the sample of respondents, the number of respondents, the number of non-respondents and the timing of the survey – problems in any of these can lead to the survey results being largely valueless or potentially inaccurate.[26] Depending on the composition of survey respondents, there may be some upward bias in the results – for example if respondents are predominantly investors seeking (or hoping for) higher risk premiums on their investments. Caution is also warranted in interpreting independent expert reports (including any 'one-off' adjustments made in these reports), in light of the context in which these reports are prepared. The QCA recognises the need for caution in the Draft Decision.[27]

A key issue in relation to interpretation of results from surveys and expert reports is whether an adjustment is required to account for the value of imputation credits. The QCA notes that without such an adjustment, the mean estimate from surveys and independent expert reports is 6.6 per cent, but with this adjustment the mean estimate is 7.4 per cent.[28] Professor Lally's advice is that the lower half of this range should be used (not the mid-point), because many survey participants may have already included imputation credits in their estimates, and many of those who haven't rely primarily upon historical data to form their estimate.[29]

In relation to the Wright approach, the QCA recognises that this approach assumes that the risk-free rate and MRP are perfectly negatively correlated, or at least that the cost of equity is more stable over time than the MRP.[30] However, these assumptions are not supported by empirical evidence. The QCA's analysis suggests that there is greater stability in the MRP than the real return on equity over time – a conclusion which does not support greater reliance on the Wright approach.[31] Professor Lally similarly advises that the empirical evidence on this matter favours the Ibbotson method over the Wright method.[32]

The QRC also notes that the MRP estimate produced by the Wright approach is a clear outlier among the five approaches considered by the QCA (see Table 1). It is not reflective of current market expectations of the MRP (as reflected in the DGM estimates or surveys / independent expert reports), nor does it reflect the historically observed MRP (as reflected in the Ibbotson and Siegel approaches). This suggests that Wright approach should be given limited weight in any averaging of estimates from the five approaches – as an outlier, it will clearly distort any average.

Table 1 shows a cluster of estimates for the MRP around 6.5 per cent. Estimates based on current market data (using the Cornell DGM), evidence from surveys and independent expert reports, and estimates based on the historically observed MRP all cluster around 6.5 per cent. The median and mode are both 6.6 per cent. A higher estimate only results if material weight is given to the outlier

[26] *Application by Envestra Limited (No 2)* [2012] ACompT 3 at [162].

[27] Draft Decision at pages 483 – 484.

[28] Draft Decision at page 83.

[29] Lally, Review of WACC submissions on Aurizon's regulatory review, May 2017 at page 38.

[30] Draft Decision, page 491.

[31] Draft Decision, page 493.

[32] Lally, Response to Submissions on the Risk-Free Rate and the MRP, report for the QCA, October 2013, page 66.

Wright estimate in a weighted average – an approach that the QRC would not endorse, for reasons set out above.

The QRC considers that the weight of current evidence – as set out in Table 1 below – indicates that the best point estimate for the prevailing MRP is 6.5 per cent.

Table 1: Estimates of the MRP

Method	Estimate	Basis for estimate
Ibbotson	6.6%	QCA estimate, based on preferred sampling period
Siegel	5.9%	QCA estimate, based on preferred sampling period
Survey / independent expert reports	6.6%	Lower end of QCA range – per Lally advice
Cornell DGM	6.4%	Median QCA estimate
Wright	9.5%	QCA estimate, based on preferred sampling period
Median	**6.6%**	

5.4 Equity beta

Estimation of the equity beta broadly involves two steps:

- identification of the relevant comparator set – that is, the set of businesses which exhibit a risk profile that is similar to the risk faced by Aurizon Network in the provision of regulated services; and
- estimation of asset beta for the relevant comparator set (which can be converted to an equity beta for Aurizon Network using the Conine formula).

The QRC agrees with the QCA's conclusions in relation to relevant comparator set, and fundamentally disagrees with Aurizon Network's proposal to benchmark its asset beta against North American oil and gas pipelines.

The QRC also considers that 0.42 represents a reasonable estimate of the asset beta for this comparator set. However, for reasons discussed below, we consider this to be an inherently conservative (high side) estimate of the asset beta, in light of current empirical evidence.

(a) The appropriate comparator set

The QRC supports the QCA's approach to assessing Aurizon Network's risk profile and identifying relevant comparators for the purposes of beta estimation. In particular, we agree that any beta analysis should "look through" the physical characteristics of Aurizon Network's operations to assess the economic fundamentals underpinning cashflows.[33] We also agree that the risk profile of Aurizon Network is closely linked to the design of the regulatory framework.

The QRC has long argued that Aurizon Network is heavily insulated from risk by the regulatory framework.[34] The degree of risk faced by Aurizon Network has been reduced over time, through incremental changes to its regulatory arrangements, such as:

- introduction of the revenue cap to address volume risk;
- increased scope of take or pay arrangements;
- introduction of capital expenditure pre-approval processes;

[33] Draft Decision, pages 106 – 107.

[34] For example: QRC submission in response to Aurizon Network's rate of return proposal for UT4, October 2013.

- accelerated depreciation, to reduce asset stranding risk; and
- broadening the scope of review events.

Incenta, in its report for the QCA, notes a number of these risk protection mechanisms and explains how they give rise to relatively low systematic risk. Incenta notes that the regulatory framework applied to Aurizon Network will result in cash flows that are essentially independent of the economic cycle, which should result in relatively low systematic risk.[35]

These risk protection mechanisms have also been identified by market analysts, and are factored into market assessments of Aurizon Network's risk profile. For example, ratings agency Moody's observed in a recent report:

> The take-or-pay nature of Network's access charges paid by rail haulage operators and users, coupled with the true-up features in the regulatory framework, are designed to insulate the company from coal volume risk. The revenue cap mechanism in the regulatory framework provides protection to the company, because volume declines should result in tariff increases to the remaining users, although on an individual rail system basis as opposed to the entire network.
>
> In similar vein, Network's regulatory mechanism allows for the company to socialise lost revenue among its remaining counterparties on a particular rail system in the event of an early termination of a counterparty contract in the second year following the shortfall and subject to regulatory approval.[36]

Based on a comprehensive analysis that applies both theory and empirical evidence, Incenta concludes that regulated energy and water businesses are the best available comparators to estimate Aurizon Network's systematic risk.[37] The QRC agrees with this conclusion. Regulated energy and water businesses are most comparable to Aurizon Network, largely because the regulatory frameworks that apply to them have similar in-built risk protection mechanisms – for example most regulated electricity network businesses operate under a revenue cap which protects them from volume risk.

By contrast, North American pipeline businesses operate under very different regulatory frameworks, and are not protected from risk to nearly the same extent as Aurizon Network. A key difference between Aurizon Network and the North American pipeline businesses is that the latter are, to varying degrees, exposed to competition. It has been observed that, at least in the United States, there are important geographic features which undercut pipeliners' ability to act as natural monopolies, and instead expose their operations to competition – in particular, the fact that major consumption markets often lie between different supply areas, leading to intensive rivalries between producers and pipeline companies striving to meet the demand.[38] Consequently, as observed by Incenta, many US pipelines are not natural monopolies, and are constrained by the forces of competition, not regulation. This is reflected in the evolution of the regulatory framework for US pipelines towards a more 'light-handed' approach, starting with a series of Department of Justice reviews of pipeline competition in the mid-1980s.[39] Today, the approach to rate-setting for US pipelines is determined on a case-by-case basis, depending on the degree of competition faced by each pipeline. Consequently, some pipelines operate under 'market-based' rates and others under cost-based price caps. Even in cases where cost-based price cap regulation is applied, this does not protect a pipeline's cash flow from volume risk (unlike the Aurizon Network revenue cap framework).

[35] Incenta, Aurizon Network's WACC for the 2017 DAU: Report for the Queensland Competition Authority, December, 2017, page 29.

[36] Moody's, Aurizon Network Pty Ltd: Update to credit analysis following release of UT5 draft regulatory determination, 19 December 2017, page 2.

[37] Incenta, Aurizon Network's WACC for the 2017 DAU: Report for the Queensland Competition Authority, December, 2017, page 10.

[38] Jeff D Makholm, *The Political Economy of Pipelines*, 2012, University of Chicago Press, page 40.

[39] US Department of Justice, *Oil Pipeline Deregulation*, May 1986. See also: Jeff D Makholm, *The Political Economy of Pipelines*, 2012, University of Chicago Press, pages 72 – 76.

(b) The best estimate for the comparator set

In the Draft Decision, the QCA accepts the recommendation of Incenta as to the best estimate of the asset beta for the relevant comparator set – a value of 0.42. This translates to an equity beta of 0.73 for Aurizon Network, using the QCA's preferred Conine formula.

The QRC accepts that, in light of Incenta's thorough empirical analysis and consideration of all relevant information, it is reasonable for the QCA to adopt an equity beta of 0.73 for Aurizon Network.

However, the QRC considers this to be a highly conservative estimate of the equity beta, in the sense that it is much more likely to overstate (rather than understate) the degree of risk faced by Aurizon Network. This is for two reasons:

- First, while we agree that regulated energy and water businesses are the best available comparators, some businesses within this sample are likely to face greater risk than Aurizon Network. In particular, the QRC understands that the set of regulated energy businesses used by Incenta would include covered gas pipelines, which are typically subject to price cap regulation, and are therefore exposed to volume risk. This means that the asset beta estimate from this sample is likely to overstate the appropriate asset beta for Aurizon Network.
- Secondly, the QRC notes that Incenta's asset beta estimates for the relevant sample are materially lower over the more recent 5-year period, compared to its estimates for the 10-year period from 2007 to 2016 which are relied on by the QCA. Incenta reports an average asset beta of 0.36 and a median asset beta of 0.34, for the 5-year period from 2012 to 2016 (compared to an average estimate of 0.42, and median of 0.41, for the 10-year period). This suggests that the degree of risk faced by these regulated businesses has been trending downwards, and that a 10-year estimate is likely to overstate the current asset beta.

Finally, the QRC notes that other regulators' estimates of the asset / equity beta for regulated energy and water businesses are typically lower than the Incenta / QCA estimates. For example, the AER adopts an equity beta of 0.7 (implied asset beta of approximately 0.37)[40] for regulated energy businesses operating in the NEM, with this value chosen from a range of 0.4 – 0.7.[41] In Victoria, the Essential Services Commission adopts an equity beta of 0.65 (implied asset beta of approximately 0.35)[42] for regulated water businesses.[43]

Therefore, while the QRC accepts the QCA's judgement on this issue, we consider the equity beta estimate to be highly conservative in favour of Aurizon Network.

5.5 Overall return on equity

The Draft Decision provides for an overall return on equity of approximately 7 per cent. This is comprised of:

- the risk-free rate of 1.90 per cent; and
- an 'equity risk premium' of 5.09 per cent.

The QRC notes that the overall return on equity is broadly in line with recent regulatory decisions for comparable businesses, despite the risk-free rates under these decisions being based on different averaging periods and being materially lower than the rate in the Draft Decision. This is caused by the equity risk premium under the Draft Decision being materially higher than in these recent decisions (see Table 2). The QRC also notes that, in a relatively recent determination, the Tribunal has upheld a decision of the AER to adopt a return on equity for regulated gas and electricity businesses in NSW of 7.1 per cent (including an equity risk premium of 4.55 per cent).[44]

[40] Gearing for these businesses is assumed to be 60%.

[41] For example: AER, Final Decision: APA VTS gas access arrangement 2018 to 2022, Attachment 3 – Rate of return, November 2017, pages 3-64.

[42] Gearing for these businesses is assumed to be 60%.

[43] For example: Essential Services Commission, Melbourne Water Price Review 2016: Final decision, June 2016, page 53.

[44] *Applications by Public Interest Advocacy Service Ltd and Ausgrid Distribution* [2016] ACompT 1 at [632] – [814].

Table 2: Recent decisions on the return on equity

Business	Business type	Date of decision	Return on equity (nominal)	Equity risk premium
APA GasNet	Gas transmission	November 2017	7.3%	4.55%
AusNet	Gas distribution	November 2017	7.3%	4.55%
Powerlink	Electricity transmission	April 2017	7.4%	4.55%
TasNetworks	Electricity distribution	April 2017	7.4%	4.55%
Melbourne Water	Water	June 2016	6.6%	3.9%

The Draft Decision refers to Deloitte and EY reports submitted by Aurizon Network in relation to overall return on equity estimates implied from surveys and independent valuation reports. The Deloitte survey report suggests a return on equity of 7 – 9.5 per cent for “high quality regulated assets and infrastructure assets”, and 8 – 11 per cent for “high quality transport assets, including ports and airports” (the QRC notes that Deloitte does not specifically identify the businesses included in each category, and so it is difficult to assess comparability). The EY report suggests that the overall return on equity implied by independent valuation reports is higher than under the standard regulatory approach to estimating the return on equity. The EY report suggests that the main reason for this difference is that independent valuers may make some adjustments to their approach where they perceive bond rates to be at unsustainably low levels. EY states that these may either be adjustments to the risk-free rate estimate, or to the overall return.

It is not clear what Aurizon Network seeks to demonstrate by reference to these reports. Aurizon Network’s submission simply states that “the mechanistic way in which the QCA has applied the CAPM results in an implied return on equity that is consistently well below the assumptions applied by these independent experts, particularly in more recent years when the risk-free rate has been very low”.[45]

It may be the case that the approach adopted by the QCA is *different* to the approach taken in some independent valuation reports. However, this does not mean that the QCA’s approach is incorrect or inappropriate. On the contrary, it is likely to reflect the different context in which the QCA is estimating the return on equity for Aurizon Network, and the different purpose for which it does so.

Certainly, the QCA’s approach could not fairly be described as ‘mechanistic’. The Draft Decision reflects a thorough consideration of all available evidence in relation to each element of the rate of return. The result of this consideration is that the QCA has adopted different parameter estimates to past decisions – hardly an outcome that could be described as mechanistic.

It is also not the case that the QCA has simply applied a fixed value for the MRP in combination with a variable risk-free rate – an alleged practice which attracts particular criticism from EY.[46] The QCA has increased its estimate of the MRP over time as the risk-free rate has fallen, based on careful consideration of the most current evidence.

There are many reasons why the approach taken by independent valuers (and hence their return on equity estimates) might differ from the approach taken by the QCA. These include:

- **Different purpose**. The purpose of independent valuation reports is to provide a valuation of a business or asset for a certain transaction. Valuers estimate a return on equity and overall rate of return to use as a discount rate to discount forecast cash flows. The discount rate (and return on equity) therefore must be related to the cash flows it is

[45] Aurizon Network Submission: 2017 Draft Access Undertaking, 30 November 2016, page 261.

[46] Ernst & Young, Market evidence on the cost of equity, 22 November 2016, page 4.

discounting. Notionally, the discount rate should reflect only the non-diversifiable risks faced by the business being valued. However, if the cash flows do not reflect all the diversifiable risks faced by the business being valued, the valuer may account for these risks by adjusting the discount rate.

- **Accounting for diversifiable risk.** It is also possible that, in some cases, a valuation report may include a discount rate that is not solely reflective of non-diversifiable risk. This may be the case if particular investors' portfolios are not diversified, meaning that a higher discount rate would be applied to their investment.
- **Interrelationship between discount rate estimates and other elements of the cash flow analysis**. In some cases, a valuer may apply specific uplifts to the discount rate to account for cash flow risks that would not (and should not) be accounted for in a regulated rate of return. In a recent decision in which it considered the relevance of independent valuation reports, the AER cites an example of this, from an expert report of Grant Thornton relating to Polymetals Mining. The AER notes that Grant Thornton adjusted its estimate of the return on equity to account for:

  > uncertainty associated with the early stage nature of the asset, risk associated with successfully converting mineral resources to ore resources, economic viability of extending the life of the mine, and higher technical and metallurgical recovery risk associated with Mt Boppy project due to pit mining of ore body at a greater depth compared to Marda project.[47]

- **Timeframe for analysis**. Independent valuers will typically adopt a perpetuity (or project life) timeframe when valuing a business and estimating a relevant return on equity. In such cases, an uplift to account for a relatively low prevailing risk-free rate may reflect an expectation that the risk-free rate to revert to a long-term trend over the relevant timeframe (perpetuity or project life). This may be contrasted to determining a regulated rate of return where the return on equity only applies for the length of the regulatory period (in this case, four years) and is updated at the start of the subsequent regulatory period.

For these reasons, the QRC considers that any direct comparison of the QCA approach with that of independent experts is unlikely to be of much practical assistance. Certainly, it cannot provide evidence that the QCA's approach is somehow incorrect or inappropriate.

To the extent that Aurizon Network might suggest some adjustment to the QCA's approach to align it with the approach taken by independent experts (at this stage, it is not clear what adjustments, if any, Aurizon Network is advocating) the QRC would not support this. The QCA's overall approach to estimating the return on equity is robust and supported by theoretical and empirical evidence. Arbitrary adjustments to this approach – such as those applied in some valuation reports – cannot be justified within the assessment framework to be applied by the QCA.

5.6 Capital structure and credit rating

The QRC agrees with the QCA's Draft Decision on capital structure and benchmark credit rating, which is to accept Aurizon Network's proposal on both matters.

The Draft Decision notes a credit rating simulation analysis performed by Incenta, which suggests that Aurizon Network's credit metrics over the forthcoming regulatory period may fall marginally below the BBB+ 'cut-off' identified by Standard & Poor's. The QRC considers that this analysis does not support any change to the benchmark credit rating assumption for Aurizon Network, for three reasons:

- First and foremost, Aurizon Network continues to maintain a credit rating of BBB+ from both Moody's and Standard & Poor's.[48] The Moody's rating was reviewed following release of the QCA's Draft Decision, and Moody's decided to maintain its Baa1 rating

[47] Grant Thornton, Polymetals Mining Ltd: Independent expert report and financial services guide, 31 May 2013, page 101, cited in: AER, Final Decision: SA Power Networks determination 2015−16 to 2019−20 Attachment 3 − Rate of return, October 2015, pages 3 – 521.

[48] https://www.aurizon.com.au/investors/debt-investors-content-page (accessed 15 February 2018).

and 'stable' outlook.[49] Standard & Poor's similarly maintains its BBB+ rating and 'stable' outlook for Aurizon Network.

- Secondly, the Incenta simulation analysis is heavily caveated, and is likely to have underestimated the relevant 'financial risk' metric used by Standard & Poor's (funds from operations (FFO) / debt). Incenta notes that its assessment of regulated cash flows did not incorporate revenues associated with capital deferrals for WIRP Moura and NAPE.[50] The Incenta calculation of revenue for Aurizon Network also does not incorporate any non-regulated revenue which would be relevant to the Moody's and Standard & Poor's assessments – this non-regulated revenue is likely to be substantial and would include GAPE fees, WIRP fees, and non-access revenue.[51]
- Finally, it is by no means certain that, even if Aurizon Network's metrics were to fall marginally below the Standard & Poor's financial risk thresholds in one or more years, this would lead to a credit downgrade. It is clear from the Standard & Poor's rating guidelines that these thresholds are not applied mechanistically.[52] Rather, financial risk metrics are used, along with business risk metrics, to determine an 'anchor' rating. The final rating may differ from the 'anchor' rating based on 'modifiers', which include both qualitative and quantitative factors such as the degree of diversification, capital structure, financial policy, liquidity and management / governance.

Standard & Poor's has previously explained that its ratings matrix is intended to be indicative only, and that actual ratings outcomes may differ from what is indicated by the matrix in some circumstances. Standard & Poor's states:

> The rating matrix indicative outcomes are what we typically observe--but are not meant to be precise indications or guarantees of future rating opinions. Positive and negative nuances in our analysis may lead to a notch higher or lower than the outcomes indicated in the various cells of the matrix.[53]

In this case, there are various features of the regulatory framework – such as the manner in which the RAB is rolled forward and escalated for inflation each year – which might be seen as a 'positive nuance' to Aurizon Network's credit profile.

The QRC also understands that both Moody's and Standard & Poors are unlikely to adjust credit ratings based on short-term changes in credit metrics. Rather, downgrades are only likely where key metrics fall below the applicable thresholds on a consistent or sustained basis.[54] Hence, if there is an expectation that revenues will return to higher levels in the medium term (e.g. if there is an end to revenue deferrals), this may influence the ratings outlook.

In short, we consider that the QCA should place very limited weight on the simulation analysis conducted by Incenta, which Incenta acknowledges has several limitations. Instead, the QCA should look to the ratings published by Standard & Poor's and Moody's – both of which continue to sit at BBB+ for Aurizon Network.

5.7 Debt margin

The QRC accepts the Draft Decision in relation to the debt margin for Aurizon Network. The Draft Decision reflects a careful analysis of the various methodological issues that have been raised by stakeholders, and is supported by expert evidence.

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[49] Moody's, *Aurizon Network Pty Ltd: Update to credit analysis following release of UT5 draft regulatory determination*, 19 December 2017.

[50] Incenta, Aurizon Network's WACC for the 2017 DAU: Report for the Queensland Competition Authority, December, 2017, pages 84 – 85.

[51] Aurizon Network reported approximately $30 million in non-access revenue in the first half of FY18: Aurizon Holdings Limited, Interim Financial Report for the six months ended 31 December 2017, page 13.

[52] S&P Global Ratings, Criteria | Corporates | General: Corporate Methodology (accessed 15 February 2018).

[53] Standard & Poor's Ratings Direct, Criteria | Corporates | General: Methodology: Business Risk/Financial Risk Matrix Expanded, September 2012.

[54] For example, in its recent review of its credit rating for Aurizon Network, Moody's notes that its rating may be downgraded if it expects FFO/debt to remain below its threshold on a consistent basis (Moody's, *Aurizon Network Pty Ltd: Update to credit analysis following release of UT5 draft regulatory determination*, 19 December 2017, page 2).

The QRC notes, however, that the QCA's decision on this issue is once again highly conservative in favour of Aurizon Network. Whereas the QCA assumes a 10-year term of debt for purposes of estimating the debt margin, Aurizon Network typically issues debt in the Australian market at shorter maturities, leading to a lower cost of debt. For example, during the June 2017 averaging period, Aurizon Network issued $425 million worth of debt, with a 7-year term to maturity. The fixed coupon rate attached to this recent debt issue was 4%, below the cost of debt allowance in the Draft Decision.[55]

Again, we do not suggest that the cost of debt allowance should be pegged to Aurizon Network's actual cost of debt – it should reflect a benchmark efficient cost allowance. We observe that the assumption of a 10-year debt term is likely to be conservative in favour of Aurizon Network, in light of its established practice of issuing debt at shorter terms.

5.8 Gamma

The QRC supports the QCA's Draft Decision in relation to gamma.

The QRC observes that the estimation of gamma requires a high degree of regulatory judgement. There is no one figure for gamma, nor any estimation methodology, that is universally accepted to be correct. Rather, there are various methodologies and estimation techniques available, and differing views among experts and regulators as to the most appropriate approach.

The Tribunal has observed (in a decision recently upheld by the Full Federal Court)[56] that:

> …in relation to the concept of the "value of imputation credits"… different theoretical models, all of which are simplifications of reality, with different strengths and weaknesses, and with different degrees of support among experts, may suggest differing approaches. Judgement about the weight to be given to alternative approaches would then be required...[57]

In a series of recent decisions, the AER's exercise of judgment in relation to gamma has been affirmed by the Tribunal and/or Full Federal Court.[58] It should be noted that these decisions have not been an affirmation of the 'correctness' of the figure selected by the AER (which differs slightly from the QCA's figure). Rather, these decisions have noted that the estimation of gamma involves discretion and judgement, and have concluded that there was no error in the AER's exercise of discretion.

5.9 Overall rate of return

The QRC considers that, overall, the rate of return provided for in the Draft Decision is reasonably commensurate with the regulatory and commercial risks faced by Aurizon Network.

The QRC has noted that, in relation to several parameters, the QCA's estimates appear to be highly conservative in favour of Aurizon Network – for example in relation to the equity beta and MRP. However, the QRC is willing to accept the QCA's judgement on these matters.

The QRC notes that the overall rate of return in the Draft Decision is broadly in line with recent regulatory decisions for comparable businesses. For example, in its November 2017 decisions for gas transmission and distribution businesses in Victoria, the AER determined an overall rate of return for each business of less than 6% (5.67% for Multinet; 5.75% for APA GasNet; and 5.94% for AusNet Services). The difference in the rate of return between each business, and the difference between these outcomes and the Draft Decision for Aurizon Network, largely reflects movement in bond yields over the past 12 months.

Finally, the QRC notes that, contrary to Aurizon Network's submissions, the Draft Decision WACC outcome cannot be compared with the WACC outcome applied to the Australian Rail Track Corporation (**ARTC**) in respect of the Hunter Valley Network. The ACCC's final decision for ARTC,

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[55] 'Aurizon successfully prices A$ Medium Term Notes', 14 June 2017.

[56] *SA Power Networks v Australian Competition Tribunal (No 2)* [2018] FCAFC 3.

[57] *Application by SA Power Networks* [2016] ACompT 11 at [138].

[58] For example: *Application by ActewAGL Distribution* [2017] ACompT 2 at [333] – [339]; *Application by SA Power Networks* [2016] ACompT 11 at [159]; *SA Power Networks v Australian Competition Tribunal (No 2)* [2018] FCAFC 3 at [55] – [57].

and submissions made by stakeholders during that process, 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.[59]

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.

The QRC notes that, on a comparable basis (i.e. controlling for differences in timing of measurement periods and gearing levels), the WACC allowed for ARTC in the ACCC's April 2017 draft decision is very similar to that provided for by the QCA in the Draft Decision (see Figure 1 above).

6 Volume forecasts

The QRC does not have a view on the total volume forecasts suggested in the Draft Decision. We understand that the QCA has developed those forecasts on a mine-specific basis, but has not published that information. The QRC has obtained mine-specific forecasts from some of its members, to assist the QCA to verify or adjust its forecasts for those mines. That information will be provided in a separate, confidential submission.

We note that the QCA's volume forecasts do not reflect the restrictions on system throughput which are being imposed by Aurizon Network. Given the deliberate and unnecessary nature of those restrictions and our expectation that Aurizon Network will cease abusing its monopoly power in this way at some point, we suggest that volume forecasts should not be adjusted for these restrictions at this stage and that, to the extent that the restrictions result in shortfalls in actual volumes, Aurizon Network should not be able to recover the lost revenue through the revenue cap mechanism. Alternatively, volume forecasts could be reduced to reflect the expected impacts. In this case, the MAR should be calculated by reference to the portion of capacity which is being made available during this period. That is, the portion of normal system capacity which Aurizon Network is making unavailable through its actions should be removed from the return on capital, fixed maintenance and fixed operating costs.

7 Operating cost allowance

7.1 Overview

The QRC has reviewed the Draft Decision regarding the operating cost allowance. The Draft Decision appears to reflect a thorough assessment of each element of Aurizon Network's proposed allowance. The QRC would support revision of Aurizon Network's allowance only to the extent that Aurizon Network is able to demonstrate that additional costs reflect efficient costs. To the extent that Aurizon Network presents new information in support of a revised operating cost allowance, we would encourage the QCA to conduct a thorough review of that information.

7.2 System-Wide and regional costs

(a) Bottom up analysis

The QRC is disappointed that the QCA has not developed an allowance for system-wide and regional costs based on a 'bottom-up' estimate or by benchmarking against a comparable efficient

[59] Unlike Part 5 of the QCA Act, Part IIIA of the *Competition and Consumer Act 2010* (Cth) does not allow the ACCC to require particular amendments to an access undertaking, nor does it allow the ACCC to draft and approve its own amendments to an access undertaking.

business. These approaches would ensure that inefficient costs are not carried forward into future allowances. However, we accept that the base-step-trend approach can also provide a reasonable estimate of efficient costs, if appropriate adjustments are made to the base.

(b) Selection of base year

The QRC agrees that, if actual costs are to be used as a base, then it is appropriate to use the most recent data available. For this reason, the QCA proposes to adopt FY2016 as the base year for system-wide and regional costs. The QRC supports this decision. FY2016 costs are the most up to date reference point available. This base should minimise the number of adjustments which need to be made to the base cost.

(c) Allocation of costs

The QRC generally accepts the QCA's analysis regarding cost allocations to regulated below-rail services, except as noted below.

Major Projects

We have concerns regarding the draft decision to allow 50% of the cost of the Major Projects team to be recovered from below-rail services. Much of the focus of this team's work appears to be on large projects (where the majority of costs would be capitalised and therefore should not also be recovered through operating costs) or on extracting additional revenue beyond Reference Tariff revenue (GAPE or WIRP). We also note that development of SUFA is one of the key regulatory processes in which this team has been involved. SUFA has now been withdrawn, following an eight-year process involving many millions of dollars of expenditure. Introduction of SUFA was a key commitment made by Aurizon Network around the time of privatisation, as reflected in UT3, but it has never been delivered. The outcome of this eight-year process has been:

- confirmation that Aurizon Network is unwilling to allow for effective competition in the financing of major projects, preferring instead to capture GAPE/WIRP style returns;
- uploading of a "RUFA" to Aurizon Network's website, an unworkable user-funding template which Aurizon Network may choose to offer for future projects in the unlikely event that Aurizon Network seeks to create an alternative to its own funding offers, but which Aurizon Network may withdraw or amend at its discretion; and
- a further process now required under UT5.

We question how the ongoing costs of the Major Project Group's participation in the failure to develop SUFA can continue to be considered an efficient cost. We suggest than an estimate of the cost of Aurizon Network's participation in UT5 SUFA processes should be deducted from the costs allowed for the Major Projects group.

(d) Network Regulation

We have concerns regarding the proposal to allocate 100% of the costs of the Network Regulation team to regulated below-rail services. We consider that only the efficient costs of this team's participation in regulated below-rail activities should be recovered. To the extent that the base year costs include inefficient costs such as costs relating to inappropriate DAAUs which were subsequently withdrawn or not approved, then an adjustment is required.

Regulated below-rail services include non-coal services. Non-coal services clearly benefit from most sections of the undertaking. It seems clear that an allocation of Network Regulation costs to non-coal services is appropriate.

Non-coal activities

The QRC accepts the analysis of AECOM and the QCA, which concludes that train kms are the best causal allocator for allocation of Network Train Operations costs between coal and non-coal services.

For other cost categories, we share the QCA's apparent confusion regarding Aurizon Network's approach to the allocation of costs to non-coal services. 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. 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). The QCA proposes to allocate a portion of Network Finance and Network Train Operations to non-coal services. For other categories, it appears that the QCA's Draft Decision to accept Aurizon Network's proposal is, at least in part, driven by the difficulties which have been encountered in gaining clear explanations from Aurizon Network. We think that a more appropriate decision would be to make an adjustment, in the absence of Aurizon Network demonstrating that an adjustment is already reflected in its claim. Aurizon Network should not be rewarded for its lack of transparency and lack of cooperation.

(e) Step changes

The QRC generally accepts the QCA's analysis of step changes, noting that in some cases, the step change sought by Aurizon Network is reflected in the costs of the new base year (as proposed by the QCA), such that no step change adjustment is then required.

We note that the QCA has not added a step change for the additional costs which are documented in the QCA's Table 54. This is on the basis that these costs are incremental business-as-usual costs which can be met within the overall allowance. We agree with this approach. Aurizon Network's proposal involves adjustments for every minor upward variation from the base year costs, but no similar downward adjustments. Clearly this will produce an inefficient estimate. The QCA's approach is reasonable, however, we suggest that the QCA should clarify in the Final Decision that it is not prescribing that the functions set out in Table 54 should not be performed, or issuing a directive to that effect.

7.3 Corporate overheads

(a) Bottom up analysis or benchmarking

Our comments regarding the preference for a bottom up analysis or benchmarking approach, as set out in Section 7.2(a), apply equally to Corporate Overheads.

(b) Selection of base year

We agree with the QCA that, if a base-step-trend approach is to be adopted using actual costs as a base, then the most recent actual costs available should be used.

(c) Allocation of costs

Direct cost allocator

The QRC generally accepts the QCA's analysis regarding cost allocations. Our understanding is that, where costs are allocated based on direct costs, the direct costs allocator:

- excludes maintenance costs, corporate overheads, energy and fuel costs. Consistent with the UT4 decision, this would mean that the cost of electrical energy, which is effectively passed through to customers, is not included within the direct costs which are used to calculate Aurizon Network's percentage of Corporate Overheads;
- is consistent with the UT4 decision in terms of items which are included/excluded from direct costs (for example, depreciation costs are excluded); and
- is based on the Direct Costs which the QCA proposes to approve under the Draft Decision, rather than on the amounts proposed by Aurizon Network.

We ask that the Final Decision include clarification of composition and values of the Aurizon Network direct costs which are used in the calculation of the allocator.

Information technology costs

We support the QCA's draft decision, which is based on advice from AECOM, that, in the absence of information on software licence numbers, FTE is a more reasonable allocator for IT costs than the direct cost allocator.

FTE allocator

We accept the QCA's assessment of Aurizon Network's share of FTE's based on AECOM's assessment, which includes increasing that share above the rate proposed by Aurizon Network. We are concerned that Aurizon Network's share continues to grow due to reductions in staff numbers in other parts of the Aurizon group and suggest that this situation should be monitored in the future to determine whether this is caused by Aurizon Network's FTE count being inefficient.

Non-coal deductions

We do not understand the QCA's reasoning regarding non-coal deductions. The corporate overhead allocated to Aurizon Network has been based on the costs which would be incurred by a standalone network business, and a standalone network business would provide services to non-coal customers and would provide some non-regulated services. Therefore, it seems to follow that the overhead allocated to Aurizon Network needs to be split between regulated coal services, non-coal services and unregulated activities.

Recovery of overhead through AT5

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.

(d) Step changes

Tenancy costs

We do not understand why Aurizon Network forecasts increased occupancy costs arising from the consolidation of the corporate office, despite claiming that the consolidation will deliver substantial cost reductions for the Aurizon group. We agree with AECOM's view that the benefit of cost reductions should be passed proportionally to Aurizon Network. This is the practice for all increases in overhead costs. We note that, although the QCA "accepts AECOM's advice", the draft decision is based on an escalation of current costs, which AECOM refers to as a 'reasonable alternative estimate', rather than on an estimate which reflects the benefits of lower costs. The reason for adopting an alternative estimate, rather than proposing a calculation which allocates the lower forecast cost, consistent with other overhead categories, is unclear.

Transformation program savings

We accept the Draft Decision to reflect benefits of the transformation program based on the value of 'locked in', 'implementing' and 'cash-flowing' projects, and 50% of the value of 'evaluating' projects. We accept that a true-up at the end of the UT5 period, as proposed by AECOM, would leave Aurizon Network with no incentive or upside. Based on the approach proposed in the Draft Decision, Aurizon Network will:

- bear a risk if the 'locked-in', 'implementing' and 'cash-flowing' projects do not deliver the expected benefits, or if the 'evaluating' projects deliver less than 50% of the expected benefits;
- retain the benefits of the 'evaluating' projects to the extent that benefits greater than 50% are achieved; and
- retain 100% of all initiatives which are implemented over the UT5 period which have not been identified or included in the program at this time.

We consider that this reflects a reasonable balance of the interests of Aurizon Network and its customers, and provides effective incentives to Aurizon Network.

7.4 Risk and insurance allowances

The QRC generally supports the QCA's draft decision regarding risk and insurance allowances.

We question whether the estimation of projected losses for derailment and dewirement have been calculated taking into account the regulatory and contractual arrangements within which Aurizon Network operates. For example, losses of access charge revenue arising from these events will generally be recoverable under the revenue cap arrangements, and therefore will not lead to a loss, while liabilities under access agreements are extremely limited in most cases. We raise this question because we do not understand how some of the risk categories would vary with volume forecasts (for example, weather related losses) as proposed by Finity, or company turnover (which the QCA has said that it would consider).

We support the QCA's draft decision to provide an allowance for the projected cost of uninsured losses, with no profits or margins on this expected cost. Aurizon Network refuses to formalise its self-insurance arrangements, and it is not clear to us that the costs arising from some of these losses are not already provided for within maintenance allowances.

7.5 Electricity transmission and connection costs

We accept the draft decision to approve Aurizon Network's claim, noting that costs will be revised to reflect final forecast volumes, and that differences between forecast and actual costs are reconciled through the revenue cap arrangements.

7.6 Electric traction energy costs

We accept the draft decision regarding electric traction energy costs.

7.7 Cost escalation

We accept the QCA's analysis and conclusions regarding cost escalation for operating costs.

8 Maintenance cost allowance

8.1 Overview

The QRC has reviewed the Draft Decision regarding the Maintenance Cost Allowance. The Draft Decision appears to reflect a thorough assessment of each element of Aurizon Network's proposed maintenance allowance. Based on the information which is available to us, we:

- are unable to identify the 'fundamental errors' which Aurizon Network claims are reflected in the Draft Decision; and
- are unable to identify any instance in the Draft Decision of the QCA 'prescribing' that Aurizon Network uses particular operating and maintenance practices, as is claimed by Aurizon Network.[60]

It is clear to us that Aurizon Network has strong concerns regarding the Draft Decision, as demonstrated by its decision to implement changes which Aurizon Network estimates will result in a reduction in network throughput of 20mtpa, 'with potential to increase'. It is regrettable that Aurizon Network has elected to take this action, rather than:

- justifying its claims to the QCA via its original submission or in response to information requests from the QCA;
- reading and understanding the Draft Decision: Aurizon Network has stated that the throughput restrictions which it is imposing in the Blackwater system are primarily caused by the QCA optimising one of the five new resurfacing machines. The Draft Decision clearly states that the QCA has not optimised any excess capacity arising from the new maintenance fleet;
- looking beyond superficial analysis: We note Aurizon Network's claims that maintenance costs have not increased in line with capacity increases is simply not true;
- seriously considering the extent to which any suggested efficiency improvements could be achieved without reducing network throughput;

[60] To the extent that consultant reports provided to the QCA may appear to require certain practices, we understand that the QCA has had regard to these reports, but they are not part of the QCA's Draft Decision.

- demonstrating the QCA's claimed 'fundamental errors' in its response to the Draft Decision; or
- consulting with operators and customers regarding its concerns.

The QCA has prepared the Draft Decision taking into account the information available to it and by conducting what appears to be a thorough consideration of issues. We note that the QCA's consultants have identified a substantial range of potential efficiency improvements which would reduce maintenance costs relative to Aurizon Network's claim, yet the QCA has provided for only modest efficiency improvements within the maintenance allowance, with none reflected in the first year of the regulatory period. The QCA has not 'prescribed' that all (or in fact any) potential efficiency improvements identified by its consultants be implemented, nor has it reflected such an expectation in the proposed allowance, nor has it prioritised lowest possible maintenance costs over throughput.

The QRC would support upward revision of Aurizon Network's maintenance allowance to the extent that Aurizon Network is able to demonstrate that additional costs reflect efficient costs. We accept that an efficient cost may be greater than the lowest possible cost, as good operating practices require consideration and balancing of a range of matters, including system throughput impacts.

However, we cannot simply support a higher allowance based on unsubstantiated claims of 'fundamental errors' or in response to Aurizon Network's decisions to restrict system throughput. We consider that Aurizon Network's current actions are aimed at intimidating customers and the QCA in order to interfere with proper regulatory processes.

Furthermore, we note Aurizon Network's concern that the:

> QCA believes that we should spend less than in the UT4 period even though we have an additional $1 billion in assets to maintain, and the QCA themselves forecast 15% volume growth over the 4 years of UT5.[61]

However, the QRC consider it inappropriate to only compare the QCA's proposed maintenance allowance against movements in the RAB value and volume forecasts. The QRC considers a more balanced assessment of the maintenance allowance would note that:

- the QCA's Draft Decision maintenance allowance is higher than that of UT4;
- it is the physical assets, and not the RAB value, that is required to be maintained;
- the growth in the RAB is driven by significant renewals expenditure, which should reduce maintenance requirements, with new infrastructure requiring little maintenance in the early years; and
- increasing volumes will only drive increased maintenance to the extent that maintenance tasks are variable within the four-year period.

The QRC will continue to support proper regulatory processes. To the extent that Aurizon Network presents new information in support of a revised maintenance allowance, we would encourage the QCA to conduct a thorough review of that information.

8.2 Maintenance allowance: UT4 outcome

Aurizon Network's claims that the QCA provides insufficient maintenance allowances are not new. In the UT4 assessment process, the QCA established a maintenance allowance which was $261m lower than Aurizon Network's claim.[62] While some of this reduction was caused by the re-allocation of costs (for example, rail renewals for the final two years were reallocated to capital expenditure), the vast majority of the reduction arose from the QCA's assessment that Aurizon Network's claim was "more than necessary to provide efficient services".

If it was the case that Aurizon Network's UT4 claim was reasonable, then we would expect such a reduction to result in some combination of the following outcomes:

[61] Aurizon Half Year Results Presentation, 12 February 2018, http://www.aurizon.com.au/~/media/aurizon/files/investors/documents%20and%20webcasts/2018/interim%20results/azj-au_transcript_2018-02-11.pdf.

[62] Final Decision, April 2016, Volume IV, Table 1.

- Aurizon Network substantially overspending relative to the allowance; and
- Aurizon Network reducing the scope of maintenance activities to an extent which results in degradation of the network.

Aurizon Network's FY2017 Maintenance Cost Report reveals that neither of these outcomes have occurred.

The report states, in regard to the UT4 period, that "Across the 4-year regulatory period, Aurizon Network has over-spent its adjusted, aggregate maintenance allowance by $31m, or approximately 4%". Aurizon Network also states that the mechanised maintenance program "has broadly exceeded the forecast UT4 maintenance scope". Based on this information, the allowance established by the QCA closely reflected the costs ultimately incurred, particularly on a unit cost basis, while Aurizon Network's original claim over-estimated costs by around $200 million. We note that this does not necessarily indicate that actual costs were efficient. For example, the direct maintenance cost allowance was determined by the QCA to be a reasonable, but not necessarily efficient, allowance.[63]

Nor is it the case that the scope allowed for in the final UT4 decision, which was substantially reduced relative to Aurizon Network's claim, was insufficient. The delivered scope was closely aligned to the UT4 'forecast' (table 1 of the report), and Aurizon Network's report (page 3) asserts that the effectiveness of the CQCN maintenance program has been demonstrated by the Overall Track Condition Index for each system, by a reduction in cancellations due to below-rail events, and by the most recent Condition Based Assessment.

Based on the above information, we conclude that the QCA was correct to require substantial reductions to Aurizon Network's UT4 maintenance cost allowance, and that this did not result in insufficient scope of maintenance services or in Aurizon Network bearing a material cost in excess of allowances.

We acknowledge that this analysis is not directly relevant to the UT5 maintenance cost allowance.

The information is presented simply to:

- address any misconception that the QCA's review processes tend to underestimate reasonable allowances;
- reinforce the importance of the QCA's independent review process; and
- highlight the risk that Aurizon Network's claims may be excessive.

8.3 Retrospectivity

The need for retrospective application of the UT5 allowable revenues (in the form of Adjustment Charges or other true-up mechanisms) arises from the fact that UT5 was not approved prior to the original scheduled expiry date of UT4, which in turn was a result of the late approval of UT4. The UT4 delays were caused by the late submission of the first version of UT4 (provided by Aurizon Network only 60 days prior to the scheduled expiry of UT4), by the subsequent withdrawal of that draft, and by the extent of ambit claims contained in those drafts, both in terms of allowable revenues and the terms and conditions of the undertaking.

Avoiding the retrospectivity to which Aurizon Network objects in regard to maintenance costs would require that Aurizon Network be allowed to recover actual costs for the period of the delay. To the extent that the QCA considers actual costs to be efficient, the QRC would have no objection to this updated information being taken into account. However, we would object to Aurizon Network being allowed to recover inefficient costs.

We do not agree with Aurizon Network's claims that the Draft Decision 'prescribes' certain operating and maintenance practices, and that maintenance allowances based on these prescribed practices will be applied retrospectively.

[63] QCA, April 2016 Final Decision, Aurizon Network DAU, Maximum Allowable Revenue, Volume IV: 113.

8.4 Specific comments on Draft Decision

(a) Bottom up analysis

The QRC finds it regrettable that it has not been possible to develop a maintenance allowance based on a 'bottom-up' estimate. Alternative methods, which adjust off a base year, risk carrying forward inefficient costs and providing insufficient incentive to move towards efficient practices. We understand that implementation of a bottom up approach was not possible due to limitations and deficiencies in the information provided by Aurizon Network, and understand that persisting with a full bottom up assessment in these circumstances may have resulted in unacceptable delays to the process. We continue to seek a proper bottom up assessment of Aurizon Network's maintenance costs in the future.

(b) Selection of base year

Given the difficulties encountered by the QCA in developing a 'bottom up' allowance, we accept that a methodology which has regard to the actual costs incurred in a base year, then adjusts that cost, is a reasonable alternative.

The QCA proposes to adopt FY2017 as the base year for all but three of the maintenance categories (rail grinding, structures and signalling). The QRC supports this decision. FY2017 costs are the most up to date reference point available. This base should minimise the number of adjustments which need to be made to the base cost.

By contrast, Aurizon Network's proposal adopts the FY2015 UT4 approved cost for a range of categories, and FY2015 actual costs for most other categories. The FY2015 approved cost was originally based on FY2012 actual cost data. Clearly, deriving efficient UT5 costs from a base which, for the UT5 period, is between six and nine years past, is likely to require significantly more adjustment and is more prone to error than adopting FY2017 costs as a base. We see no basis on which FY2012 actual costs, or FY2015 actual costs, should be preferred as a base over costs which are two to five years more up to date.

We also note that the FY2015 allowance was determined by the QCA to be 'reasonable but not necessarily efficient' while Jacobs SKM found that Aurizon Network's costs were 17% higher on a per gtk basis than maintenance costs in the Hunter Valley, but concluded that the costs were 'reasonable' simply due to the limitations of benchmarking.[64] A more appropriate conclusion would have been that the costs were not conclusively proven to be unreasonable. The QRC was disappointed that this apparent difference in costs was not investigated further during the UT4 process, in order to determine the extent to which the difference reflected genuine inefficiencies. We see no reason to continue to build an allowance on a base which has not been established as an efficient cost. By contrast, FY2017 actual costs may be closer to efficient costs than FY2012 costs or the FY2015 allowance, at least to the extent that Aurizon Network has achieved efficiency improvements between FY2012 and FY2017.

To the extent that Aurizon Network considers that FY2017 actual costs are not indicative of future costs, then we would expect that Aurizon Network will be able to provide evidence as to why this is the case, and suggest any necessary adjustments to this base. For example, we note that ballast undercutting scope was below forecast as a consequence of lost track access during Tropical Cyclone Debbie. To the extent that the scope of ballast undercutting in each year of UT5 exceeds the actual FY2017 scope, then an adjustment, limited to the variable costs (and noting that the majority of costs may be fixed), may be appropriate.

(c) Adjustments to base year costs

Having selected FY2017 as an appropriate base year for all but three of the maintenance categories, the QCA then seeks to:

- recognise reasonable adjustments to scope and costs; and
- consider the rate of change for costs over the period, including MCI and productivity opportunities.

[64] Jacobs SKM report for QCA, April 2014: 16.

Adjustments:

The QCA has adjusted the FY2017 cost base as follows:

- Increasing the maintenance allowance for increased throughput volumes (gtks), based on an assumption that 50% of general maintenance costs are variable with gtks, while costs in remaining maintenance categories do not vary with gtks. We accept the QCA's assessment and note that, for a cost to vary with gtks within the UT5 period, it is necessary that:
  - the scope of work required within the undertaking period varies with gtks. If it is the case that the scope of work will only vary in the longer term, then any increase in scope will be considered under a future undertaking;

  AND

  - costs must vary with scope within the undertaking period. To the extent that costs are fixed (for example, where existing machines can accommodate the additional scope), then no adjustment is required.
- Reduced the scope of ballast undercutting for FY2020 and FY2021, as Aurizon Network has not provided sufficient rationale for the increase in scope compared to FY2018 and FY2019.
- Reduced the allowance for Ground Penetrating Radar based on one run and a cost of $900,000, based on a consultant's estimate of efficient costs.

(d) Efficiency allowance and improvements

The QCA has developed maintenance cost allowances based on the FY2017 base, with the limited adjustments discussed in Section 8.4.3. The QCA has then allowed for a 2% per annum efficiency factor, applied from FY2019 (year 2 of the UT5 period) onward. The QCA does not:

- **Require Aurizon Network to achieve these efficiency targets:** Aurizon Network may spend more or less than the approved allowance. This is the nature of the incentive regime under the proposed undertaking.
- **Prescribe how Aurizon Network must achieve an efficiency target:** Rather, QCA makes observations regarding a range of possible improvements or inefficiencies which, despite the adjustments noted in Section 8.4.3, may still be reflected in the FY2018 allowance. Aurizon Network may choose to adopt all, some or none of the possible improvements noted by the QCA. Aurizon Network may also develop and implement improvements which have not been identified by the QCA.

It may be the case that one or more of the possible efficiency improvements noted by the QCA is not appropriate to implement. This would not necessarily indicate that the 2% per annum target is unreasonable, because the target has not been developed on the basis that all of the possible improvements will be successfully implemented. For example, the target <u>does not fully reflect</u>:

- GHD's assessment that Aurizon Network's forecast cost of an agreed basket of UT5 maintenance activities was on average 16% higher than the costs which would be incurred by a rail operator adopting efficient operating practices;
- full adoption of all of the attributes of a 'well run railway' as identified by B&H;
- optimisation of any excess capacity arising from Aurizon Network's investment in new maintenance fleet;
- efficiencies accruing from new EBAs;
- scope and cost savings which would accrue for the grinding program if Aurizon Network implemented efficient possession management practices;
- a 192 hour (rather than 96 hour) track inspection cycle; and
- the lowering of unit costs which should apply when a larger scope of work is completed using existing equipment (as Aurizon Network proposed to maintain unit rates for some tasks, rather than calculating costs by reference to a fixed and variable component).

Aurizon Network has elected to immediately implement a number of cost reduction initiatives which it incorrectly claims are 'prescribed' by the draft decision. To the extent that the cost reductions flowing from these decisions are not reflected in the Draft Decision, we consider that cost allowances must be further lowered.

(e) Allowance for non-coal services

The draft decision notes that the QCA is “predisposed to making an allowance for non-coal services, but has not done so at this stage” .[65]

In the QCA’s April 2016 Final Decision on Aurizon Network’s 2014 DAU (page 114), the QCA stated:

> We did not consider non-coal traffic immaterial for the purpose of establishing the efficient MAR for Aurizon Network. We found that for some systems non-coal traffic contributes up to four per cent of the total system gtk. We considered it efficient to allocate a portion of the maintenance costs to non-coal traffic as long as the allocation reflected the impacts of such train services on Aurizon Network's maintenance costs.

The allocation to non-coal services under UT4 was $1.5-1.7m per annum, representing around 1.3% of direct maintenance costs. The QRC considers that the decision to allocate costs to non-coal services was appropriate and remains appropriate. We ask that the QCA considers the extent to which maintenance costs should be allocated to non-coal services to avoid a cross-subsidy between coal and non-coal traffic and an over-recovery of costs relative to efficient costs.

We suggest that the allocation should be based on:

- for variable maintenance costs, appropriate causal indicators (for example, the non-coal percentage of gtks or train kms); or
- for fixed maintenance costs, the percentage of capacity reserved for non-coal services (see discussion in Section 3.2), consistent with the QCA’s Final Decision on the Queensland Rail Access Undertaking (non-coal allocation of fixed maintenance and operating costs in the West Moreton system).

We also suggest that the QCA should consider allocation of operating costs and a portion of the RAB to non-coal services.

(f) Other matters

The QRC accepts the following additional aspects of the Draft Decision:

- **Return on assets used for maintenance purposes:** To be based on written down historical costs, rather than escalated costs. An alternative approach, in which the asset value is escalated but the escalation increment is netted off in the form of net depreciation, is also acceptable and in fact would be preferred, and would be consistent with the approach adopted for the RAB. Escalating the asset value without netting off the increment, as proposed by Aurizon Network, would provide excessive returns on the asset.
- **No optimisation of excess capacity arising from Aurizon Network’s investment in new maintenance fleet:** The QRC accepts this Draft Decision, but encourages ongoing monitoring of the issue. We would also encourage improved processes for assessing the prudency of major investments in maintenance fleet ahead of the decision to purchase, given that recent investments appear to have increased capital charges (return on assets and depreciation) without resulting in benefits in terms of lower costs (at least to customers) or improved output.
- **Return on maintenance assets and inventory:** To be based on the WACC assessed by the QCA for the RAB. The QRC would prefer that major maintenance assets be included in the RAB, so that the processes for acceptance of capital expenditure can be applied.
- **Estimate of inventory levels required for maintenance:** Alternative estimate developed by the QCA, due to Aurizon Network not substantiating its estimate.
- **Maintenance cost index:** The QRC supports the proposed construction of the MCI as set out in the QCA’s Table 93. We accept the proposed forecast MCI rates, on the basis

[65] QCA Draft Decision on Aurizon Network’s 2017 DAU: 260.

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.

(g) Aurizon Network's capacity restrictions

Aurizon Network is implementing new maintenances practices which, in its estimation, will reduce throughput by 20mtpa initially, with more reductions possible. We suggest that the Schedule F process for the Annual Review of Reference Tariffs should require that Allowable Revenue to be revised ahead of each year to reflect:

- the impact of changes in volume forecasts on maintenance costs, based on the fixed/variable assumptions outlined in the Draft Decision; and
- any cost savings which the QCA estimates would be achieved by Aurizon Network, taking into account the changes to maintenance practices, to the extent that the QCA considers that those cost savings were not reflected in the approved Allowable Revenues.

9 Schedule F – Reference tariffs and take-or-pay

9.1 EC Component

The QRC supports the proposed amendments to Schedule F, which clarify that the QCA may approve an EC if it considers that the EC is reasonable and adjustments are correctly calculated. We consider that the 'reasonableness' test provides a link to the intended 'pass-though' nature of the cost, because the definition of EC refers to a charge which "takes into account any over or under recovery in the previous Year".

9.2 Calculation of adjusted allowable revenue for operating costs

The QRC supports the proposed amendments which require that operating costs be escalated by reference to both CPI and WPI factors. We assume that these indices will be applied in the proportions which were adopted for the development of operating costs when approving the MAR.

9.3 Take-or-pay: nt and ntk calculations

The QCA has proposed that clause 3.3(e) of Schedule F be amended so that take-or-pay (**ToP**) liabilities are calculated by reference to the nt and ntk 'reasonably determined by Aurizon Network' rather than by reference to the Nominal Train Payload alone. The Nominal Train Payload is a standard payload for each system, and may differ from the Nominal Payload which appears in specific Access Agreements. We suggest that nt and ntk for the purposes of ToP calculations should be based on the Nominal Payload contained in the relevant Access Agreement. 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.

Alternative payload measures which could be considered as not appropriate:

- Actual payload: If actual train payloads are:
  - Greater than Nominal Payloads, the access holder should not be penalised (in the form of a higher take or pay requirement) for using the paths more efficiently.
  - Less than the Nominal Payloads, the ToP requirement should not be reduced, as this would have the effect of socialising the revenue shortfall with other customers.
- Nominal Train Payload (standard system payload):
  - If this is lower than the contracted Nominal Payload, then calculating ToP based on the Nominal Train Payload will reduce ToP liabilities and may not fully reflect the capacity which was effectively reserved for the higher payload train.

– If this is greater than the contracted Nominal Payload, then using the Nominal Train Payload in ToP calculations will result in a ToP liability being created even where all of the contracted paths were used, at the expected payload.

9.4 Take-or-pay: UT1 arrangements

The QCA has sought comments on the concern raised by Pacific National regarding the effect which ToP arrangements under the remaining UT1 agreements may have on other customers. UT1 agreements contain ToP rules which provide a significantly lower maximum exposure than UT2 to UT5 ToP. Despite this, UT1 agreements may contribute disproportionately to ToP revenue in some circumstances, because ToP under UT1 agreements is deemed to be collected ahead of UT2-5 ToP, and UT2-5 ToP is capped at the remaining revenue shortfall. UT1 ToP is not capped.

We suggest that any reform of ToP arrangements needs to be conducted through a thorough consultation process, and that this should not occur (other than on an informal basis) until UT5 is finalised.

9.5 Take-or-pay: Future reform

The QRC's views on ToP reform include that:

- The long-term objective should be to move towards a situation in which each Access Holder is responsible for the cost of the capacity which they have contracted, and the impacts of shortfalls in usage are not socialised with other customers. This would be achieved by calculating tariffs based on contracted capacity: that is, not inflating tariffs to reflect expected shortfalls in usage. Some effects of this would be that the system trigger test would become virtually irrelevant (ToP would always trigger), ToP capping would rarely apply and the benefits of capping, if it did apply, would be far more limited.
- The terms of existing Access Agreements should be respected until the relevant agreements expire. That is, rules should not be contrived under Access Undertakings to interfere with ToP rules which were intended to be locked in for the term of the contract. This is relevant to UT1-2 Access Agreements. For UT3-5 Access Agreements, ToP terms were not intended to be locked in. Rather, the agreements provide that the ToP terms are to be updated to reflect the current undertaking.
- Moving AT3-5 Access Agreements towards the 'long term objective' noted above, at a time when UT1-2 agreements remain a significant portion of contracted capacity, may be inequitable for UT3-5 Access Holders. Therefore, in order to gain broad support for reforms, changes should be implemented only when UT1-2 agreements reduce to a small proportion (e.g. less than 20%) of contracts within each system. Our understanding is that this will occur during the second half of the UT5 period.

On the basis of the above considerations, we suggest that a detailed review of ToP arrangements should be undertaken immediately following the approval of UT5, with a view to implementing reform from the commencement of FY2020 or FY2021. The QRC would also be willing to participate in informal consultation on this issue ahead of the approval of UT5.

9.6 Take-or-pay: Pooling

The QRC notes the QCA's draft decision regarding the pooling arrangements proposed by the Dalrymple Bay Coal Chain Coordinator (**DCCC**). We understand that the QRC members may have a variety of views on this proposal and we note the QCA's concerns with the proposal, including the concern that, to the extent that the pooling provides relief from ToP for some customers, it will also increase the amount to be recovered under the revenue cap mechanism for all system users.

Our understanding of the proposal (which we have not confirmed with DCCC) is that the customers within the pooling arrangement (single access agreement) would effectively be isolated from the general revenue cap arrangements of the system. That is, any under/over recoveries of revenue within the group would be recovered from /returned to that group. While this would address the QCA's concern, we note that it would also require significant changes to Schedule F and potentially to access agreements. We suggest that, if the draft decision to not include ToP pooling is confirmed for UT5, the proposal should be reconsidered as part of a wider review of ToP during the term of UT5.

9.7 Form of regulation and the pricing of overhead power

We note that Aurizon Operations has withdrawn its submission in regard to the reform of the form of regulation of the overhead power system, and that Aurizon Network has submitted a DAAU under UT4 which seeks to address the same issue. We accept the Draft Decision to approve the current provisions and to reconsider arrangements during the term of UT5, informed by the outcome of the UT4 DAAU process. The QRC provided a submission on Aurizon Network's Electric Traction DAAU in February 2018.

9.8 Schedule F: Other matters

The QRC suggests that Aurizon Network's recent actions, which demonstrate a willingness to abuse monopoly power at significant cost to customers and the State, demonstrate several weaknesses in the regulatory arrangements, including the way in which revenue is recovered under Schedule F. These issues are discussed in Section 10. Key concerns under Schedule F include:

- Revenue cap arrangements are too effective in insulating Aurizon Network from the effects of its own performance or actions. For example, while we consider that Aurizon Network's current actions constitute a breach of Access Agreements and negligence in the provision of Below Rail Services, we note that the revenue lost as a result of such actions is included in Total Actual Revenue only to the extent that such events of breach or negligence result in the non-provision of 5% or more of the total number of Train Services for any origin-destination pair. We suggest that, in the case of a deliberate breach, the threshold should be removed (such that all lost revenue is included in Total Actual Revenue) and a further deduction should be applied to the Revenue Adjustment Amount as a disincentive.
- The undertaking continues to lack any performance incentives. We note that Aurizon Network was required, under UT3, to submit a proposed incentive mechanism. The mechanism proposed by Aurizon Network in 2012 provided Aurizon Network with significant opportunities to increase its returns, while accepting no meaningful risk. The proposal received little support and was ultimately withdrawn. Aurizon Network continues to operate in an environment which lacks any meaningful incentive to perform.
- Aurizon Network's ability to pass through a QCA levy inflated by Aurizon Network's actions. Schedule F should 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. Customers should not be required to continue to reimburse Aurizon Network for all of the QCA's costs in these cases. For example, where Aurizon Network fails to consult meaningfully with customers prior to submitting a DAAU and the DAAU is ultimately rejected (of which there are many examples), Aurizon Network should be required to absorb the QCA's costs. While we consider that the QCA could reach such a decision under existing drafting, the undertaking would benefit from further clarity.
- Maintenance costs should be revised for volume changes and changes in practices: See the discussion in Section 8.4(g).

10 Changes to UT5 required as a result of Aurizon Network's new maintenance regime

10.1 Introduction

Aurizon Network has recently undertaken a series of unprecedented actions which deliberately limit the throughput of the CQCN. These actions could not have been foreseen by the QCA or by any stakeholder – largely because the actions are neither consistent with the access agreements or the existing access undertaking. As such, UT4 and the draft UT5 (including as amended by the QCA) do not adequately deal with this behaviour. This is new information which was unavailable to stakeholders at the time of preparing submissions on the DAU, and was unavailable to the QCA when preparing the Draft Decision. It would be an understatement to say that this new information is material. We consider that substantial changes are required to the DAU in order to provide an appropriate undertaking, in light of this new information. Substantially modifying an access undertaking after a Draft Decision should only be done in exceptional circumstances – these are exceptional circumstances.

10.2 Aurizon Network's approach in responding to Draft Decision

Aurizon Network has been strident in publicly voicing its disagreement with the Draft Decision, including through ASX releases. In particular, Aurizon Network has publicly disagreed with the QCA's Draft Decision on allowable operation and maintenance charges, derided the QCA and has also sought to link its objections to the proposed WACC. While Aurizon Network's disagreement has been expressed stridently it has not to date provided any information to explain why the QCA was in error or proposed an alternative to the QCA's Draft Decision. In fact, it is fair to say that Aurizon Network's response has been the opposite of constructive. It is our view that Aurizon Network has taken this approach to attempt to disrupt the proper regulatory process and to create leverage in its bargaining over UT5.

On 30 January Aurizon Network announced its intention to change its operating and maintenance practices. It further announced with immediate effect that there would be changes to planned maintenance. Aurizon Network said that those changes would degrade supply chain performance.

On 12 February through an email from Mr Michael Riches, Aurizon Network announced that its "estimate" of the "net impact" of changes to its operation and maintenance practices was a loss of throughput of 20 million tonnes annually. It did not identify which systems would be affected or by what volumes. As at the date of this submission, Aurizon Network has not explained what systems are affected or by how much, despite requests for this information. How Aurizon Network could determine a total system affect without being able to explain the affect on a system basis is hard to understand. Despite that, Aurizon Network is confident that the impact on capacity will become worse than the forecast 20 million tonne amount. How much worse and when those additional impacts will arise Aurizon Network cannot or will not say.

Since implementation of the new operation and maintenance regime there has been an increase in the number of train paths not being scheduled or being cancelled. The reasons given by Aurizon Network is simply the "new maintenance regime". In addition, information flow has been restricted. Access holders, train operators and customers have been advised that there will be increased outages and increased loss of capacity, but again have not been told when, why (other than the new maintenance regime) or by how much. Overall, the effect on access holders, train operators and customers is significant.

Copies of Aurizon Network's emails and ASX release are attached to this submission at Schedule 1.

10.3 Aurizon Network's justification for the new regime

Aurizon Network has justified its change to operation and maintenance practices on the basis that is the changes are a requirement of the QCA. Aurizon Network argues that comments by the QCA in a Draft Decision on possible efficiency improvements, and on what should be an efficient allowable cost, somehow represents a requirement or shield to change Aurizon Network's operation and maintenance practices. Aurizon Network was given the opportunity to explain the basis for this belief but to date have chosen not to do so.

It is of course the case that there is no link between the QCA's assessment of allowable operation and maintenance charges and the scope and standard of operation and maintenance which Aurizon Network is required to undertake. The QCA does not direct Aurizon Network as to the way in which Aurizon Network should operate and maintain the network. Put simply, there is no basis or justification for the change to operation and maintenance practices. The QCA's Draft Decision does not provide a shield for a failure to operate and maintain properly, to coordinate with supply chain participants and provide contracted train paths.

An additional feature of Aurizon Network's change in maintenance practices is that it does not intend changing scheduled maintenance to maximise throughput or accommodate other parts of the supply chain. What other coal chain coordination activities Aurizon Network will cease to undertake is not yet certain. Again, in Aurizon Network's view this is a mandated requirement of the QCA. Putting to one side the fallacy in the suggestion that a Draft Decision mandates anything, the QCA does not other than through changes to access undertakings direct Aurizon Network as to the scope of its coal chain coordination obligations.

10.4 Changes to undertaking required to respond to Aurizon Network's behaviour

As is noted in this submission and by Aurizon Network in its various communications, the effect of Aurizon Network's new operation and maintenance regime is very significant. Aurizon Network has implemented those changes despite the QCA process, without any forewarning, without any attempt to consult and (it seems) with no desire to reach a resolution. The implementation of Aurizon Network's new maintenance regime constitutes a breach of its access agreements and also the Access Undertaking. Access holders, train operators and customers will separately engage with Aurizon Network about those breaches. It is however clear that additional changes are required to the Access Undertaking to address Aurizon Network's behaviour. It is important that the undertaking contains effective remedies for this type of situation. The alternative, of relying only on the enforcement of access agreements, is not an appropriate solution due to:

- the number of agreements which must be separately enforced;
- the various generations of access agreements;
- the lack of transparency available to access holders;
- the fact that the stakeholders most affected (the miners) are often not the access holder (although those customers have other rights at law); and
- the conflicted position where Aurizon Operations is the access holder.

The changes required, discussed below, are:

- To ensure that Aurizon Network cannot recover the return on capital, fixed maintenance costs and fixed operating costs that relate to the portion of capacity which is sterilised by Aurizon Network's actions.
- To better define the required scope and standard of operating and maintenance practices.
- Introduction of enhanced, independent capacity assessments, so that the capacity which is genuinely made available in the form of usable paths is understood.
- Enhanced supply chain coordination obligations.
- A one year review point at which the full effects of Aurizon Network's behaviour can be considered.

(a) Adjustment to maximum allowable revenue where capacity not delivered due to Aurizon Network

The access undertaking is drafted on the assumption that the network will be operated so as to provide the capacity which has been contracted. Access holders have made very substantial investments on the basis that coal chain capacity exists to enable the sale of their product.

If it is the case that Aurizon Network can elect to operate or maintain the network and knowingly adversely affect capacity of the network, that decision should impact on the revenue which Aurizon Network is permitted to earn. The maximum allowable revenue should not be a guarantee of revenue where Aurizon Network makes a decision to deliberately degrade its own performance. The maximum allowable revenue is set based on certain assumptions around how the network would be operated - it should not be the case that Aurizon Network can unilaterally reduce the ability of access holders to access the network without any adverse commercial impact on the maximum allowable revenue. The QCA Act s138(2)(e) provides that one factor which the QCA must consider in relation to a draft undertaking is "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". That is clearly applicable in this case.

Aurizon Network's proposed changes to operation and maintenance practice is an event which justifies an adjustment to its maximum allowable revenue.

The adjustment to the maximum allowable revenue could occur in one of two ways:

- Firstly, the maximum allowable revenue could be reduced by a proportion equivalent to the proportion by which capacity is reduced by the change in operation and maintenance practices.
- Alternatively, any shortfall in the revenue cap attributable to the reduction in available capacity due to the operation and maintenance regime should not be recoverable. This is currently the case (as such loss would be an Aurizon Network cause), but it should be made clearer and more mechanical. It is also the case that the revenue cap adjustment does not provide relief where tonnages are modified for the new operation and maintenance regime.

In order for the second alternative to be effective it would be necessary to remove the 5% threshold provided for in Schedule F (please see our comments at section 9).

(b) Statement of scope and standard of operation and maintenance services in access undertaking

While the access agreements impose clear operation and maintenance standards on Aurizon Network, dealing with a global unilateral and wrongful change by Aurizon Network in operation and maintenance standards requires enforcement by access holders individually. This may not be the most efficient means of enforcement. It would be more practical if the access undertaking particularised the scope and standard of operation and maintenance activities by Aurizon Network and that the QCA be able to arbitrate any dispute relating to that scope and standard. Inclusion of the scope and standard of operation and maintenance practices in the undertaking will also avoid issues arising from differences in generations of access agreements.

(c) Enhanced role for an independent determination

For two reasons there is a justified need for an independent party to take a much larger role in determining capacity and for that determination to occur more frequently than what is contemplated in the access undertaking. All capacity assessments should as a matter of course be undertaken by a QCA appointed independent expert. The expert should make all determinations of capacity (and not just review Aurizon Network's determination). Aurizon Network and all other stakeholders may make submissions to the expert. The capacity determinations should occur frequently and whenever a bona fide complaint is made by an access holder or access seeker.

The justification for the expanded independent expert role is as follows:

- Firstly, Aurizon Network's behaviour in unilaterally and wrongfully modifying operation and maintenance practices, as well as its deliberate withholding information about capacity effects demonstrates a need for greater transparency. That transparency cannot be obtained whilst Aurizon Network holds all of the information and the involvement of an independent expert is reactionary and infrequent. The lack of transparency is exacerbated by the fact that industry suspects that actual system capacity was before implementation of the changed operation and maintenance practices lower than contracted capacity.
- Secondly, if the QCA accepts the need to amend the maximum allowable revenue as outlined above, there will be an additional and key role for an independent expert to play in assessing capacity.

As it currently stands, Aurizon Network considers that it can undertake action without repercussion because it holds the information. Aurizon Network's behaviour over the past two months demonstrates the need for the imbalance in information to be rectified.

(d) Increased reporting obligations

There is a need for increased reporting on operation and maintenance related matters. As is noted above, Aurizon Network have over the past two months withheld information about its operation and maintenance practices which has hampered the ability for all other parts of the coal chain to plan. Aurizon Network should provide the following:

- key operation and maintenance activities on a monthly basis by system to all access holders, operators and customers;
- number of train paths not scheduled as a result of an Aurizon Network act or omission, including maintenance; and
- any other information which the QCA may require.

The above information should be made available in an open and accessible way.

(e) Supply chain coordination

As is noted above, Aurizon Network has announced that it will no longer act flexibly in scheduling maintenance practices. In the QRC's view, this is not consistent with Aurizon Network's supply chain coordination obligations in clause 7A.3 of UT5. So that all stakeholders have complete clarity as to the scope of the coordination role, clause 7A.3 of UT5 should be expanded so that:

- Aurizon Network is required to provide coal chain participants with clear details of maintenance activities and work collaboratively with rail and port operators to align maintenance periods; and
- Aurizon Network is required to schedule maintenance activities at times which permit maximum throughput.

(f) Review point

As is highlighted above, Aurizon Network have announced that additional changes to operation and maintenance practices will continue to be rolled out and that there will be more throughput impact. The full effects of the new operation and maintenance regime are not yet known, but what is known is that Aurizon Network have said it will get worse. In addition to those facts, there is a gross lack of trust in Aurizon Network and in the conflicted position which it has above and below rail. For those reasons, we consider it appropriate that UT5 provide the QCA with a review point to consider the effects of the operation and maintenance regime and for the QCA to have the power to impose amendments to UT5 to address additional concerns which it may have.

(g) A question of policy

Aurizon Network's approach to the Draft Decision, together with a long history of ambit and unfounded regulatory claims by Aurizon Network and Aurizon Network's inability to reach consensus with stakeholders raises a broader policy question. Should there be a different model of ownership and operatorship of the network? It may be appropriate for the QCA to undertake a productivity review (outside of the regulatory process) of the way in which the network is owned and operated.

Part B: Draft access undertaking provisions

The preceding sections explain the changes which the QRC consider are warranted to the DAU. Other than as explained in the preceding sections (in particular section 10) and in section 12 (below) the QRC is supportive of the DAU as is proposed to be amended by the QCA. In particular, the QRC supports the drafting changes which have been proposed by the QCA in appendices H, I,J, K L, M and N of the Draft Decision. A further explanation of why the QRC supports the drafting changes in appendices H, I J, K L, M and N of the Draft Decision is outlined below.

11 Preamble and intent and scope (Clause 2 of the DAU)

The QRC are supportive of the proposed changes to part 2 proposed in appendix H of the Draft Decision. The drafting serves to provide greater clarity over the operation of the undertaking in the event that the service is declared through the proposed forthcoming review process. That clarity is a good thing and for the benefit of all parties.

12 Ring-fencing (Clause 3 of the DAU)

The QRC notes that the QCA proposes to approve the ring-fencing provisions included in clause 3 of the DAU on the basis that they are appropriate. The QRC consider that the proposed ring-fencing provisions are in no way adequate and are not appropriate to approve as drafted. The QRC support Pacific National's view that there should be greater management, board and information separation of Aurizon Network from the remainder of the Aurizon group.

Aurizon is a publicly listed private entity. Its interests are first and foremost to maximise value for its shareholders. Aurizon has clearly stated that its goal is to become a fully integrated logistics company and has touted the benefits that integration brings. Reputable media reports note that Aurizon have submitted a bid to purchase the Wiggins Island coal terminal. Aurizon's natural and understandable drive to integrate and maximise value impinges on the separation which is required to create a level playing field for above rail operators (and potentially port operators).

Aurizon Network's strong resistance to further separation itself creates concern about the competitive benefit which Aurizon is enjoying over its competitors. While Aurizon Network alleges that the rationale for its resistance is one of efficient cost and administration the QRC consider the real motivation is otherwise.

The QRC note that it is difficult for the coal industry to identify breaches of the ring-fencing provision. The simple reason for that is that customers just don't have access to the relevant information. 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 ring-fencing provisions have been identified. The appropriate question should be are these arrangements providing a fair and level playing field? The answer to that question is no.

It is evident that there is wide spread scepticism from the coal industry as to the effectiveness of the current ring-fencing arrangements to create a level playing field. Clearly, Pacific National have little confidence that there is a level playing field. In the QRC's view the balance of convenience in these circumstances weighs in favour of creating more robust ring-fencing provision in order to provide confidence necessary to ensure that there is a level playing field.

13 Negotiation framework (Clause 4 of the DAU)

Refer to section 'Part B: Draft access undertaking provisions'.

14 Access agreements (Clause 5 of the DAU)

The QCA has proposed minor changes to clause 5.1 of the DAU. The changes primarily relate to related changes proposed by the QCA to clause 11 of the DAU (being the dispute clause). The QRC wholly support the changes to clause 11 and accordingly support the minor consequential changes to clause 5 of the DAU.

15 Pricing principles (Clause 6 of the DAU)

Refer to section ‘Part B: Draft access undertaking provisions’.

16 Available capacity allocation and management (Clause 7 of the DAU)

The QCA have proposed the renaming of a definition used in the transfer clause. The change is simply to correct an incorrect reference. The QRC are of course supportive of that change.

17 Capacity and supply chain management (Clause 7A of the DAU)

The QCA have proposed amendments to Part 7A which is the provision which explains when and how capacity assessments should be undertaken. The amendments are appropriate because they clarify the role which the independent expert is to play in respect of capacity assessments. That is a complete and fresh review and not an audit as to whether Aurizon Network’s model has produced the result it intended. Capacity assessments are obviously fundamental. Complete clarity as to the role of the independent expert is similarly fundamental. Without a proper review there cannot be any confidence as to the accuracy of a capacity assessment undertaken by Aurizon Network.

Capacity of the network has become an even bigger issue in light of Aurizon Network’s new maintenance regime. Information and information control has also become a very significant issue because Aurizon Network have announced impacts on capacity, but have not explained when and where. As is noted in section 10 Aurizon Network have also announced that the capacity impacts will only worsen – again when and where is not specified. Those facts justify a radically different role for the independent expert than was contemplated in prior submissions by the QRC. It is the QRC’s view that all capacity determinations should as a matter of course be undertaken by an independent expert, and not Aurizon Network. Further, information about capacity should be more readily available to all coal chain participants. Accordingly, in the QRC’s view, Part 7A of the DAU should be re-written. The QRC would be willing to offer drafting for Aurizon Network and the QCA’s consideration.

The QCA has also proposed changes to Part 7A so as to introduce a system capacity test. The QRC are wholly supportive of a system capacity test. Having knowledge of what the system capacity is is important. The QRC is supportive of the drafting proposed by the QCA except that in light of the maintenance issues created by Aurizon Network system capacity tests should be undertaken by an independent expert and not Aurizon Network.

18 Network development and expansions (Clause 8 of the DAU)

The QCA have proposed three sets of changes to part 8 of the DAU. The QRC wholly supports the changes proposed by the QCA (discussed further below).

The first change is to remove the ability to have the first right to fund expansions. That is, that an Access Seeker can seek to fund an expansion in circumstances where Aurizon Network is willing to fund (even at the regulatory rate of return). 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 (not all expansions, but a meaningful amount).

The second set of changes is to deal with the standard user fund agreement suite. The QCA's changes primarily provide the QCA with a power to impose a standard user funding agreement suite where the QCA consider the suite proposed by Aurion Network not to be appropriate. The QRC consider such power to be essential. In the QRC's view, Aurizon Network has no commercial interest in there being an effective and alternate to Aurizon Network funding. Having a user funding suite which is workable is the only form of competition for Aurizon Network funding. The experience of industry is that for material expansions Aurizon Network require a rate of return well in excess of that considered reasonable by the QCA. We also note that the there is no ability to force Aurizon Network to undertake and fund an expansion. The QRC also note that the development of a SUFA suite has been a requirement since UT3. The ongoing development of SUFA has been a feature of UT3 and UT4. The delay in development of SUFA has been Aurizon Network – as is noted above, it is not in Aurizon Network's interests to have an effective SUFA suite. For these reasons 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 in the access undertaking.

The third set of changes provides for an acknowledgement that Aurizon Network should be responsible for a capacity shortfall where the shortfall results from its negligence. It is difficult to understand why Aurizon Network should not be responsible for its own negligence and this is just a common sense clarification. Without this clarification what incentive would there be to properly deliver an expansion? The QRC wholly supports this change.

19 Connecting private infrastructure (Clause 9 of the DAU)

The QCA have proposed changes to part 9 of the DAU such that Aurizon Network is required to submit a standard rail connection agreement to the QCA and if the QCA considers its appropriate may require changes to the standard proposed by Aurizon Network. The QRC wholly supports the drafting proposed by the QCA. In particular, the QRC consider it especially important that the undertaking provide the QCA with clear power to impose changes to a draft standard agreement where the QCA consider it appropriate. That power is essential to ensuring an expeditious and reasonable outcome on a standard document.

20 Reporting, compliance and audits (Clause 10 of the DAU)

Refer to section 'Part B: Draft access undertaking provisions'.

21 Dispute resolution and decision making (Clause 11 of the DAU)

In its DAU Aurizon Network had proposed to water down the scope of disputes which could be covered by the undertaking. In the Draft Decision the QCA has proposed changes to broaden the scope of the dispute resolution clause. Those changes are important to ensuring that there is an ability for access seekers to initiate disputes in relation to basic access undertaking matters, including the negotiations of access agreements. The rationale for Aurizon Network's proposal to limit the dispute resolution clause is not clear and troubling.

The QCA has also proposed changes to clarify the effect of an expert determination. The QRC consider this clarification to be important.

The QRC wholly supports the changes proposed by the QCA to part 11 of the DAU.

Glossary of terms

Any capitalised terms used throughout this submission have the meaning given in UT5 unless otherwise defined below or stated otherwise.

Term	Meaning
2017 DAU	Aurizon Network's 2017 Draft Access Undertaking
Act / QCA Act	*Queensland Competition Authority Act 1997* (Qld)
AER	Australian Energy Regulator
ARTC	Australian Rail Track Corporation
Aurizon Network	Aurizon Network Pty Ltd
CGS	Commonwealth Government Securities
CQCN	Central Queensland Coal Network
DAAU	Draft Amending Access Undertaking
DCCC	Dalrymple Bay Coal Chain Coordinator
MAR	Maximum Allowable Revenues
MRP	Market Risk Premium
NPV	Net Present Value
QCA	Queensland Competition Authority
QCA's Draft Decision / Draft Decision	The QCA's draft submission on UT5 dated December 2017

QRC	Queensland Resources Council
RWG	Rail Working Group
Standard User Funding Agreement / SUFA	The standard form of user funding agreement
ToP	Take or pay
UT1	QR's 2001 access undertaking
UT2	QR's 2006 access undertaking
UT3	QR Network's 2010 access undertaking
UT4	Aurizon Network's 2016 access undertaking approved by the QCA on 11 October 2016
UT5	Aurizon Network's draft 2017 access undertaking
WACC	Weighted Average Cost of Capital

Schedule 1

Updates on UT5

From: Riches, Michael [mailto:Michael.Riches@aurizon.com.au]
Sent: Tuesday, 30 January 2018 12:47 PM
To: Riches, Michael <Michael.Riches@aurizon.com.au>
Subject: Draft Decision on the UT5 Access Undertaking

To all customers, rail and port operators and CQCN supply chain stakeholders

As you are aware, the Queensland Competition Authority (QCA) issued its Draft Decision on the UT5 Access Undertaking on 15 December 2017. Since that time, Aurizon Network has conducted a detailed assessment of the QCA's Draft Decision, which has confirmed our initial view that it contains fundamental errors which will have significant adverse impacts on the operational efficiency and capability of the Central Queensland Coal Network.

Aurizon Network will be capturing our concerns in our submission to the QCA's Draft Decision, which is required to be submitted by 12 March 2018.

In summary, the QCA's Draft Decision prescribes that Aurizon Network uses certain maintenance and operating practices, and does not incentivise future investment in the Central Queensland Coal Network (CQCN). The net result of the QCA's Draft Decision, if implemented, would be degradation of supply chain performance. Clearly, this would deliver an adverse outcome for coal customers, rail and port operators, and collectively for the State's coal industry.

We have worked hard in recent years to deliver superior safety and operational performance on the CQCN, which, in the first quarter of FY2018, carried record tonnages of 58,833,167mt facilitated by a flexible approach to maintenance activities. We understand how critical performance is to our customers, as well as the global competitiveness of Queensland's coal exports. We have no desire to see a reduction in availability or supply chain performance. However, Aurizon Network is left with few options given the nature of the QCA's Draft Decision and the retrospectivity of the QCA decision-making process.

When the QCA's Final Decision on the UT5 Access Undertaking is released (expected in CY2018), it will apply retrospectively from 1 July 2017 (when the UT5 regulatory period commenced). Aurizon Network cannot wait for the Final Decision before implementing some of the changes stipulated in the QCA's Draft Decision that could have serious commercial impacts on our business.

As a result, we will progressively introduce changes to align our operating practices and business decisions with the requirements of the QCA's Draft Decision. Initially, Aurizon Network will be implementing a change to the planning and execution of planned maintenance and capital works and I will keep you informed of other changes as they are introduced.

By way of example, you will be aware that Aurizon Network currently plans and carries out maintenance activities (e.g. mechanised maintenance such as ballast undercutting and resurfacing) and capital works with a focus on varying its work times and scope during the planning stage, and on the day of operations, to flexibly meet customers' requirements. This flexibility maximises the throughput of coal services for our customers, however the QCA's Draft Decision has identified this as an inefficient maintenance practice. As such, Aurizon Network needs to change its practices so as to prioritise adherence to the initially formulated plan for planned maintenance and capital works, in the manner advocated by the QCA and its consultants.

We will engage with industry over coming weeks on specific issues in the QCA's Draft Decision where there may be potential for agreement with customers. To the extent you feel there is an area where a collaborative submission could be made, we would welcome your input. We will continue to substantiate our position and document the errors in the QCA's Draft Decision.

We remain committed to delivering value to all our customers and providing a service that best meets your requirements. To continue to operate efficiently, these objectives will need to be balanced with the allowances that have been provided by the QCA and the practices that are reflected in the QCA's Draft Decision as being required to be adopted by us.

Despite these challenges, be assured that our first priority is, and will always be, safety.

If you wish to discuss any of these matters, please contact me michael.riches@aurizon.com.au and 0429 310 983.

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Safety is our core value

From: "Riches, Michael" <Michael.Riches@aurizon.com.au>
Date: 12 February 2018 at 07:59:30 AEST
To: "Riches, Michael" <Michael.Riches@aurizon.com.au>
Subject: Update on UT5

To all customers, rail and port operators and CQCN supply chain stakeholders

In my email of 30 January 2018, I advised that Aurizon Network will progressively introduce changes to align our operating practices and business decisions with the requirements of the Queensland Competition Authority's (QCA) UT5 Draft Decision (Draft Decision). I also noted that the net result of implementation of the QCA's Draft Decision would be a degradation of supply chain performance.
As part of the process of aligning our practices and decisions we have been evaluating the impact that these changes may have on the supply chain.
As referenced in today's half year results release by Andrew Harding, Aurizon's Managing Director and Chief Executive Officer, we estimate the net impact of initial changes to begin aligning Aurizon Networks operating practices and business decisions could be a reduction of system throughput of approximately 20 million tonnes annually.
Aurizon Network will continue assessing its operating practices and business decisions and will advise customers and stakeholders of changes as we progress our evaluation of the impact of the Draft Decision. However we expect further changes to our operating practices will occur and that there will be further significant impact to throughput.

Our first priority is, and will always be, safety.
If you have any questions about this or any other matter please contact me at Michael.Riches@aurizon.com.au or 0429 310 983.
Kind regards
Michael Riches

ASX Announcement

Date: 12 February 2018

Aurizon Half Year 2018 Financial Results

$m (Continuing operations)	1HFY2018	1HFY2017	Variance
Revenue	1,565.3	1,621.2	(3%)
EBIT – Underlying	485.3	511.5	(5%)
EBIT – Statutory	485.3	355.5	37%
NPAT – Underlying	281.5	295.0	(5%)
NPAT – Statutory	281.5	185.8	52%
EPS – Underlying (cps)	13.9	14.4	(3%)
EPS – Statutory (cps)	13.9	9.1	53%
DPS (cps)	14.0	13.6	3%

Today, Aurizon reported Underlying Earnings Before Interest and Tax (EBIT) of $485 million for its continuing operations[1] for the half year ended 31 December 2017. This represents a solid financial result despite Underlying EBIT being 5% lower against the prior comparable period (1HFY2017) due to the non-recurrence of one-off impacts of the regulatory true-ups for the Network business in 1HFY2017.

Aurizon's Statutory Net Profit After Tax (NPAT) from continuing operations of $282 million increased 52% from 1HFY2017. The change is a result of the $156 million of impairments and significant items that were recognised in the prior period.

The Board of Directors has declared an interim dividend payment of 14.0 cents per share (50% franked), which is 100% of Underlying NPAT for continuing operations and a 3% increase in dividend payment from 1HFY2017.

Aurizon has completed 75% of the $300 million on-market share buyback, which was announced in August 2017. The balance of the buyback is expected to be completed this financial year.

Aurizon's Free Cash Flow from continuing operations decreased from $387 million to $345 million, reflecting the one-off $98 million proceeds from the sale of the Moorebank terminal in 1HFY2017.

Aurizon's Total Recordable Injury Frequency Rate per million hours worked has increased by 45% compared to the previous period, as a result of updated reporting metrics introduced on 1 July 2017, and an increase in strain-related injuries. These revised metrics have broadened Aurizon's injury definitions to include contractors and all restricted work injuries in an effort to drive further improvements in the Company's safety record and to benchmark performance against global and industry leaders in safety.

[1] As announced on 15 December 2017, Aurizon is now reporting its financial information to reflect the business structure implemented on 1 July 2017. Due to the planned divestment and closure of the Intermodal business, this has been treated as a discontinued operation.

Aurizon achieved $42 million in sustainable transformation benefits in 1HFY2018. Aurizon remains on track to reach its three-year transformation target of $380 million having delivered more than $302 million of benefits since 1 July 2015. The target $380 million will include the benefit of removing $48 million of losses in the Intermodal business.

Commentary from Managing Director & CEO, Andrew Harding

"During the half, Board and management have maintained a sharp focus on the key priorities highlighted to the market in 2017 and this is reflected in today's solid results.

The loss-making Intermodal Interstate business was closed as planned in December 2017; we are on track to deliver on our three-year transformation target of $380 million; and we are 75% complete with the $300 million buyback, and will complete the balance by June.

We have returned $688 million to shareholders since January 2017, and the Board announced an interim dividend today of 14.0 cents per share from the Company's continuing operations.

We are realising improved operational and customer service performance through our simplified business unit structure that came into effect in July, together with relocation of more roles in our very capable workforce to regional hubs. Continuing the momentum of continuous improvement is fundamental to delivering on our FY2018 targets.

Coal

The operating and financial performance of the Coal business remains solid as we see continuing strong demand for Australian metallurgical and thermal coal, with a healthy commodity pricing environment for Australian producers.

Aurizon continues to grow haulage tonnes with new and existing customers, with tonnes increasing 2% in Central Queensland and 12% in New South Wales and South East Queensland during the half. What is particularly encouraging from an industry perspective is new tonnes coming into the market with the impending opening of MACH Energy's Mt Pleasant Mine in the Hunter Valley and QCoal's Byerwen metallurgical coal mine in Queensland's Bowen Basin. Both are new contracts for Aurizon with a ramp-up to a tonnage level of up to 18 million tonnes per annum.

While demand has improved, a competitive haulage market is putting some pressure on contract prices. However, by leveraging innovation, scale and synergies, Aurizon continues to grow volume and value for shareholders with commercial returns on coal haulage contracts. Transformation efforts underway will drive further productivity improvement and cost competitiveness.

Bulk

The turnaround plan for Bulk, detailed to the market in mid-2017 as part of the Freight Review, is gaining traction. There have been cost reductions and operational reforms, such as our improved on time performance of the Kalgoorlie Freighter. We have started hauling zinc concentrate for MMG in North West Queensland and have secured a 10-year contract renewal with Cement Australia in Central Queensland.

Network

Operationally the Network business has performed strongly, with a 3% improvement in volumes to 116.6 million tonnes for the half (112.9 million tonnes in 1HFY2017) highlighting the recovery in throughput after Cyclone Debbie. Network revenue is down reflecting the one off regulatory true-up from UT4 in 1HFY2017.

The outstanding issue is the extremely disappointing Draft Decision for UT5 that was issued by the Queensland Competition Authority (QCA) in December.

Our detailed review has confirmed that the Draft Decision contains fundamental errors and flawed logic. Aurizon will make a detailed submission by the 12 March 2018 deadline. Unfortunately, Aurizon cannot wait for the QCA Final Decision (expected later this year) to implement changes given the significant commercial impacts which, under the QCA process, are retrospective to 1 July 2017.

The QCA states Aurizon should spend less on maintenance than the previous regulatory period (a decision it made in November 2016) for a rail network that has $1 billion more assets to maintain (20% bigger) and which is forecast by the QCA to transport 15% more coal over the four-year regulatory period. The Draft Decision reflects a clear approach by the QCA to drive maintenance to the lowest possible cost regardless of the impact on the supply chain and the consequential reduction in volumes.

Aurizon also cannot reconcile the QCA's decision that Aurizon Network's risk for investing (WACC) should be 5.41%, compared to 6.30% recommended by the Australian Competition and Consumer Commission in 2017 for the government-owned Hunter Valley Coal Network, an asset which many of our customers regard as having a lower risk profile than the Central Queensland Coal Network.

On 30 January 2018, Aurizon advised the coal supply chain that it would progressively introduce changes to align its operating practices and business decisions with the requirements of the QCA's Draft Decision, and reflecting the way we assess and manage risk in a lower return environment. This is not a decision we have made lightly given the impacts to Aurizon's own business and to the Central Queensland coal supply chain, including miners, ports and rail operators and the flow-on effects to regional economies and government royalties. However, Aurizon has little choice given the significant financial impact and the retrospectivity of the QCA process.

Aurizon initially is implementing changes to planned maintenance and capital works. One area of change is that previously Aurizon varied work times and the scope of works to meet customers' requirements, allowing trains to pass during the work schedule. Going forward, Aurizon will prioritise lowest-cost maintenance over flexibility (with no trains passing), a process advocated by the QCA and its consultants. Flexibility maximises the throughput of coal services for customers, however the QCA's Draft Decision states this is an inefficient maintenance practice. We estimate the net impact of initial changes could reduce system throughput by approximately 20 million tonnes annually. As we continue to align our operating practices to the QCA's Draft Decision further changes are likely to be implemented, with potential to further reduce volumes.

Intermodal

The closure and divestment of the Intermodal business is being progressed. The Intermodal Interstate business was closed as planned at the end of 2017, and surplus locomotives as well as experienced employees have transferred to the growing NSW Coal business.

Subject to regulatory approval, we are targeting closure of the transactions for the sale of the Queensland Intermodal business and the Acacia Ridge Freight Terminal on, or around, 30 June 2018. If we are not able to gain ACCC approval for the transaction Aurizon will close the Queensland Intermodal business, as we have done with the Interstate business, and potentially impacting up to 350 jobs."

Outlook

Aurizon confirms its previous guidance for FY2018 of Underlying EBIT in the range of $900 – $960 million.

Aurizon Network has started initial implementation of revised operating and maintenance plans as a result of the QCA's Draft Decision on the UT5 Access Undertaking and this is expected to impact Network availability and throughput. This results in a reduction in above rail coal volume guidance to 210 – 220 million tonnes (previously 215 – 225 million tonnes).

The outlook is subject to no material changes in our customers' trading environment and no major weather impacts.

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