



Draft Decision

Capricornia System Rules

April 2013

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SUBMISSIONS

This report is a draft only and is subject to revision. Public involvement is an important element of the decision-making processes of the Queensland Competition Authority (the Authority). Therefore submissions are invited from interested parties concerning its assessment of the proposed System Rules for the Capricornia coal system. The Authority will take account of all submissions received.

Written submissions should be sent to the address below. While the Authority does not necessarily require submissions in any particular format, it would be appreciated if two printed copies are provided together with an electronic version on disk (Microsoft Word format) or by e-mail. Submissions, comments or inquiries regarding this paper should be directed to:

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The **closing date** for submissions is **Friday 21 June 2013**.

Confidentiality

In the interests of transparency and to promote informed discussion, the Authority would prefer submissions to be made publicly available wherever this is reasonable. However, if a person making a submission does not want that submission to be public, that person should claim confidentiality in respect of the document (or any part of the document). Claims for confidentiality should be clearly noted on the front page of the submission and the relevant sections of the submission should be marked as confidential, so that the remainder of the document can be made publicly available. It would also be appreciated if two copies of each version of these submissions (i.e. the complete version and another excising confidential information) could be provided. Again, it would be appreciated if each version could be provided on disk. Where it is unclear why a submission has been marked “confidential”, the status of the submission will be discussed with the person making the submission.

While the Authority will endeavour to identify and protect material claimed as confidential as well as exempt information and information disclosure of which would be contrary to the public interest (within the meaning of the *Right to Information Act 2009 (RTI)*), it cannot guarantee that submissions will not be made publicly available. As stated in s187 of the *Queensland Competition Authority Act 1997* (the QCA Act), the Authority must take all reasonable steps to ensure the information is not disclosed without the person’s consent, provided the Authority is satisfied that the person’s belief is justified and that the disclosure of the information would not be in the public interest. Notwithstanding this, there is a possibility that the Authority may be required to reveal confidential information as a result of a RTI request.

Public access to submissions

Subject to any confidentiality constraints, submissions will be available for public inspection at the Brisbane office of the Authority, or on its website at www.qca.org.au. If you experience any difficulty gaining access to documents please contact the office (07) 3222 0555.

Information about the role and current activities of the Authority, including copies of reports, papers and submissions can also be found on the Authority’s website.

GLOSSARY

2010 undertaking	Aurizon Network's 2010 access undertaking
BMA	BHP Billiton Mitsubishi Alliance/BHP Mitsui Coal
CAC	Critical Asset Calendar
Capricornia coal system	Blackwater and Moura coal systems
DTP	Daily Train Plan
Femol	Femol International Pty Ltd
GAPE	Goonyella-Abbot Point Expansion
GPC	Gladstone Ports Corporation
MTP	Master Train Plan
Northern Bowen Basin coal system	Goonyella and Newlands coal systems
QCA Act	Queensland Competition Authority Act 1997
SAA	Standard Access Agreement
Schedule G	Network Management Principles
TSE	Train Service Entitlement
WICET	Wiggins Island Coal Export Terminal
WTP	Weekly Train Plan

PREAMBLE

A train's progress across a rail network is affected by a large number of factors, including the movements of other trains, maintenance shutdowns, crew changes, and the status of its loading and unloading points. The operation of dozens of trains every day on an intricate network like the central Queensland coal region is particularly complicated, because the schedule does not operate to a fixed timetable, but to a cyclic schedule that can be highly variable on a weekly and even daily basis. This means that all those interactions affect not just when a train service is scheduled, but the time it actually runs on the day of operation. This variability introduces uncertainty about how an access holder's contractual entitlements (e.g. number of train services) will be delivered.

The network management principles in the 2010 access undertaking provide some guidelines on how trains will be scheduled and operated, and how Aurizon Network will show whether the capacity of the network matches or exceeds the capacity it has contracted to provide. However, they are broad principles, designed to be suited to all the rail lines managed by Aurizon Network, including those serving mines and ports with different operating capabilities and requirements.

Aurizon Network therefore proposed to develop *system rules*, which would specify in greater detail the way it would plan, schedule and control the operation of train services on particular parts of its network. The system rules would therefore overcome the limitations associated with the generalised nature of the network management principles.

A major driver for system rules was to provide the flexibility required in the Goonyella system to cope with multiple terminals and just-in-time arrival of trains at those terminals.

For the draft Capricornia system rules, which are the subject of this draft decision, the relevant port (RG Tanna at Gladstone) has ample capacity and the system runs on a stockpile-to-stockpile operating mode. Therefore the issues are not so much about flexibility in railway operations to compensate for constraints at the mine load outs and the terminals. Rather, the issues are more about a vertically integrated rail network business undertaking scheduling and train control for both its related party above-rail operator and third parties – i.e. it is about the equitable treatment of all above-rail operators so that network operations do not adversely impact the effectiveness of competition in the above-rail market.

The third-party operator and users need enough information that they understand the capacity allocation, the scheduling and the train control decisions that Aurizon Network is making. The system rules need to be transparent to ensure that the interests of all access holders and access seekers are protected.

In its draft Capricornia system rules, Aurizon Network has proposed a number of measures, including greater flexibility in transferring train paths within an access holder's portfolio, that will help improve the operation of the network.

Aurizon Network has also proposed a mechanism (a maintenance multiplier) to make up for train paths that are not delivered to access holders because of maintenance and construction activities. In addition, it has proposed a dispute resolution framework that access holders can refer to, in the event their train services have been cancelled by Aurizon Network during the scheduling process or have been delayed in the day of operation.

Some of Aurizon Network's measures relating to flexibility in the scheduling process elaborate on (and indeed, go beyond) the requirements of the network management principles, and will likely promote a more efficient use of the rail network. On this basis, the Authority has accepted many of the approaches that Aurizon Network has put forth in its system rules proposal. These matters are not the focus of this draft decision.

However, the Authority is concerned that some of these approaches are not sufficiently transparent. For example, the rules do not prescribe enough transparency to give access holders, and their customers, confidence that there is sufficient capacity in the rail network. In particular, they do not provide for publishing a master train plan that conforms with the network management principles.

The rules are also not transparent enough to demonstrate that train services are being scheduled in an efficient and equitable way. In addition, there are several mechanisms, including the maintenance multiplier, the method of determining train service entitlement consumption, and the process for allocating contested train paths, where Aurizon Network has not been sufficiently clear on how they will operate.

The Authority has sought to address these matters in this draft decision, which is to reject Aurizon Network's proposed Capricornia system rules, for reasons detailed in Chapters 2 to 5. In doing so, the Authority notes that there is still substantial work for Aurizon Network to do in developing a set of system rules which fully explain how the mechanisms for planning, scheduling and operating in Capricornia will operate, and are consistent with the approval criteria set out in Chapter 1 of this draft decision.

Way Forward

In arriving at this draft decision, the Authority has already liaised with Aurizon Network and stakeholders, and is aware that they support many of the changes proposed in this draft decision. The Authority welcomes the opportunity to work with Aurizon Network and stakeholders to refine the proposals contained, and address the uncertainties identified, in this draft decision.

The Authority seeks written comments on all matters raised in this draft decision, which are due by the close of business on Friday 21 June 2013.

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1. DRAFT CAPRICORNIA SYSTEM RULES

Aurizon Network has submitted draft system rules for the Capricornia coal system for the Authority's approval under its 2010 access undertaking (the undertaking). System rules detail train operating procedures (e.g. scheduling) that are suited to the specific characteristics of an individual coal system.

The Authority's approval of Aurizon Network's draft system rules is subject to the approval criteria in the undertaking and the Queensland Competition Authority Act 1997 (the QCA Act). This draft decision has been informed by the detailed submissions from stakeholders as well as by a report from the Authority's technical consultant.

The Authority's draft decision is to refuse to approve Aurizon Network's proposal. The reasons for the Authority's draft decision, and proposed amendments to the draft system rules for the Capricornia coal system, are set out in Chapters 2 to 5.

The Authority now invites Aurizon Network and stakeholders to provide comments on this draft decision, and will take into account all submissions received by the due date prior to making its final decision.

1.1 Background

The rail network in Queensland is operated by:

- (a) Aurizon Network Pty Ltd (formerly QR Network Pty Ltd)¹ – which operates the below-rail coal network in central Queensland and is a wholly owned subsidiary of Aurizon Holdings Ltd; and
- (b) Queensland Rail Ltd – which operates the state's below-rail network outside central Queensland.

The two businesses were separated on 30 June 2010, when the Queensland Government split the former government-owned QR Ltd in preparation for the sale and public float of QR National (since renamed Aurizon) on 22 November 2010. Queensland Rail remains a government-owned corporation.

The below-rail infrastructure of both businesses is declared for third-party access under the QCA Act. In October 2010, the Authority approved Aurizon Network's 2010 access undertaking (the undertaking).

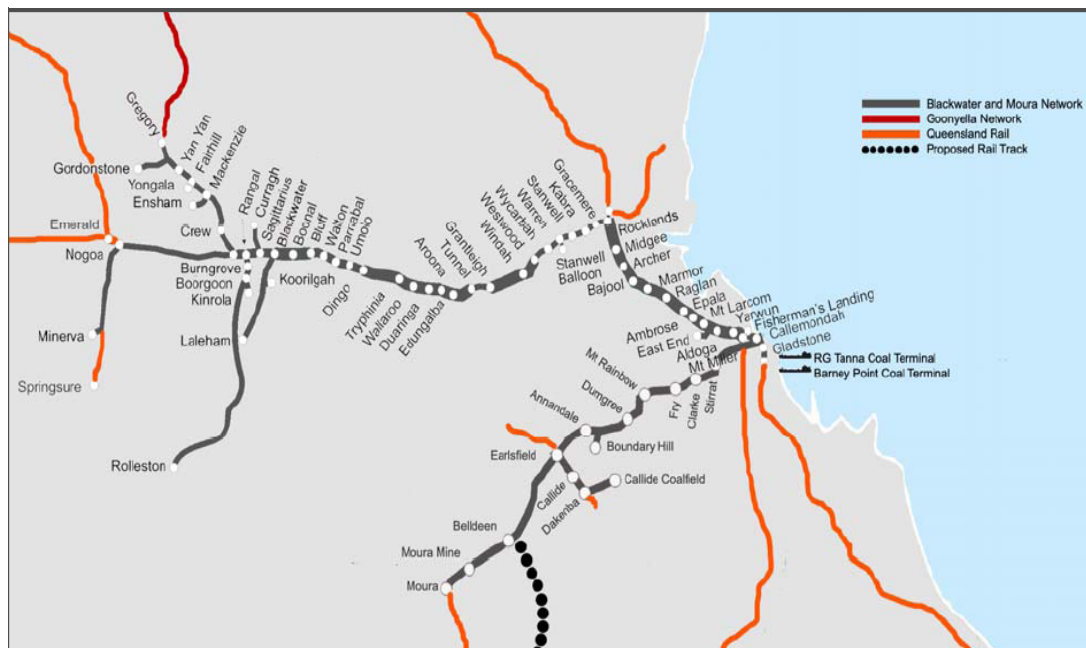
There are four coal rail systems in the central Queensland coal network, and each system has differing operating characteristics, driven by the nature of the mine and port infrastructure connected by the rail lines. These systems are:

- (a) Moura – the southernmost system that carries coal to Gladstone;
- (b) Blackwater – also serves Gladstone, and has a northern connection with Goonyella;
- (c) Goonyella – connects with terminals near Mackay, and links with Blackwater to the south, and Newlands to the north; and
- (d) Newlands – the northernmost system that carries coal to a terminal near Bowen and is linked to Goonyella.

¹ On 3 December 2012, QR Network Pty Ltd changed its name to Aurizon Network Pty Ltd.

The ‘Capricornia’ coal system consists of Moura and Blackwater, the two systems which export through terminals at Gladstone (see Figure 1.1).

Figure 1.1: Capricornia coal chain in the Central Queensland Coal Region



Source: Aurizon Network's draft Capricornia system rules

Each coal system needs to operate according to planning, scheduling, and operating protocols, both within the system and when they interact with other systems. The *network management principles* in Schedule G of the undertaking provide principles that Aurizon Network must adhere to when it plans, schedules, and controls those operations for train services, and when it provides capacity-related information to access holders.

However the network management principles are general, and not specifically tailored to the characteristics of each individual coal chain served by the rail systems. The purpose of the system rules is to specify in greater detail the way in which Aurizon Network will plan, schedule and control the operation of Train Services on a single or combination of Individual Coal Systems (2010 undertaking, schedule G, appendix 1, clause (a)).

Evolution of system rules

The network management principles apply to train scheduling and control, and capacity information, across all of Aurizon Network's track. However, the supply chain priorities vary depending on the nature of the port and mine facilities served by the rail infrastructure in different systems. Aurizon Network cited these differences when it proposed the concept of system rules in a paper on network management principles (Aurizon Network, August 2008) that it submitted as part of its material supporting its 2009 draft access undertaking (DAU).

Aurizon Network said the system rules would supplement the network management principles to tailor the operation of each system to suit that system's priorities. This would address issues such as those Aurizon Network was facing in the Goonyella system serving Dalrymple Bay Coal Terminal (DBCT). Aurizon Network said DBCT was increasingly moving:

- (a) from a steady 'even-railings' basis, where the order and timing of train arrival at the port were less important,

- (b) to a just-in-time ‘cargo assembly’ basis, where the order and timing of trains were critical.

Aurizon Network said this move to a ‘dynamic scheduling environment’ for DBCT created a risk that meeting the demands of the supply chain would conflict with the capacity entitlements in access agreements and the network management principles in the undertaking (Aurizon Network, August 2008: 5-6).

Aurizon Network indicated the system rules would increase transparency, for all supply chain participants, about how scheduling decisions were made as well as provide the flexibility required to maximise system throughput (Aurizon Network, August 2008: 5).

In its December 2009 draft decision on the 2009 DAU, the Authority approved the concept of system rules, saying it accepted ‘the principle of having specific operating rules that match the priorities of each system’s ports and mines’ (QCA, September 2009: p. 197).

However, the Authority found it difficult to form a definitive view as Aurizon Network had not submitted an example of the rules. The Authority was concerned that it was unclear whether the rules, when submitted, would simply be a formal record of scheduling and train control procedures that were already being applied, or whether they would represent a material change in the way network management was handled. It therefore required Aurizon Network to amend the undertaking so that:

- (a) the Authority would approve the initial system rules – to be submitted within nine months of the new undertaking being approved;
- (b) Aurizon Network would consult with access holders, access seekers *and their customers* when making or amending system rules; and
- (c) the Authority would resolve disputes over amendments proposed by Aurizon Network once the rules were in place.

In response to these concerns and other matters set out in the Authority’s draft decision, Aurizon Network withdrew its 2009 DAU and submitted another in 2010.

While Aurizon Network included system rules provisions in its 2010 DAU that were largely consistent with the Authority’s draft decision on the 2009 DAU, it proposed that:

- (a) the nine-month deadline only apply to the Goonyella coal system; and
- (b) it could vary the system rules, or refuse to implement them, if it was not satisfied it could use the reference tariff to recover any compensation it might have to pay to access holders whose entitlements would be affected by these rules.

The Authority, in its September 2010 final decision, said it was reasonable for Aurizon Network to recover, through the reference tariffs, any compensation it might have to pay as a result of implementing system rules. However, the Authority said that compensation should be a last resort, as the rules should be developed with give and take among the various members of the supply chain, given all would benefit in the longer term from a more efficient system. The Authority therefore required Aurizon Network to remove the compensation clauses from the system rules provisions in the 2010 DAU, and said any compensation mechanism would need to be effected through a Draft Amending Access Undertaking (DAAU) (QCA, September 2010: 126).

The approved 2010 undertaking gave effect to this approach, which enables Aurizon Network to vary the system rules without resorting to a process as formal and onerous as a

DAAU. However, affected persons (such as access holders) can appeal these changes to the Authority (schedule G, Appendix 1, and clause 10.1.4 of the undertaking, and Division 5 of Part 5 of the QCA Act).

On 31 August 2011, the Authority received Aurizon Network's draft Capricornia system rules, which are proposed to apply for the Blackwater and Moura coal systems.

Northern Bowen Basin System Rules

Aurizon Network on 30 June 2011 submitted draft system rules for the Goonyella coal system, separately to its proposal for the Capricornia system rules. Stakeholders said they were concerned that the Goonyella system rules: did not treat users of different ports equitably, provided unclear or unfair provisions for consumption of train service entitlements, and did not address the cross-system issues that arise with the inter-connection of the Goonyella and Newlands systems through the Goonyella-Abbot Point Expansion (GAPE) project.

In relation to the second of these matters, the Authority understands Aurizon Network is liaising with stakeholders to develop Northern Bowen Basin (NBB) system rules, covering both Goonyella and Newlands coal systems, which will include measures to address stakeholders' concerns. The Authority understands that Aurizon Network and the stakeholders are considering a trial of these NBB rules, which may then be submitted for approval in 2013 – for this reason the Authority has delayed its consideration of the submitted Goonyella system rules.

The Authority is aware that, while this draft decision is about the draft Capricornia system rules, several of the matters considered are common to the Goonyella and Newlands systems.

System Rules and the supply chain

In general, system rules have to be consistent with the network management principles. However, the undertaking allows the system rules to take precedence, for certain supply chain objectives, such as scheduling and day-of-operation decisions (schedule G, appendix 2, clause (c(i)), and schedule G, appendix 3, rule 8).

The Authority has not focused on these supply chain aspects in its review of the draft Capricornia system rules, as the nature of the infrastructure means that the performance of train operations is less affected by terminal stockyard constraints relative to the Goonyella coal system.² However, the Authority notes that supply chain issues relating to the interaction between port and rail operations are likely to be a central concern in its review of the NBB system rules. These interaction issues are also likely to be more important for the Capricornia system rules once there are two large coal ports (i.e. Wiggins Island and RG Tanna) at Gladstone.

² RG Tanna terminal at Gladstone has 5.95 million tonnes of reported stockpile capacity for 70 million tonnes of annual throughput (Port of Gladstone Information Handbook 2011, p. 13-14), a ratio of 8.5%. DBCT has 2.3 million tonnes of reported stockpile capacity for 85 million tonnes of nameplate annual throughput (Dalrymple Bay Coal Terminal Master Plan 2009, p. 3, 7), a ratio of 2.7%.

1.2 Approval Criteria for the Draft Capricornia System Rules

Aurizon Network has submitted draft system rules under clause 7.1(c)(ii) of the undertaking.

Approval Criteria in the Undertaking

By operation of clauses 7.1(d) and 5.2(e) of the undertaking, the Authority may approve these draft system rules only if it:

- (a) is satisfied that the draft system rules are consistent with the undertaking including the standard access agreement (SAA) principles (Schedule E) and clause 5.2(n) (the proposed alternative SAAs), as applicable;
- (b) considers it appropriate to do so having regard to the matters listed in section 138(2) of the QCA Act; and
- (c) has published Aurizon Network's draft system rules, invited stakeholders to make submissions on them and considered all submissions received (clause 5.2(d)).

Consistency with the undertaking

The Authority considers consistency with the undertaking under clause 5.2(e)(i) requires consistency with:

- (a) the requirements on Aurizon Network for preparing system rules (clause 7.1(c)(i));
- (b) the network management principles (clause 7.1 and Schedule G);
- (c) the non-discriminatory treatment provisions (clause 2.2(a)(iii));
- (d) the standard access agreement principles (schedule E) and standard access agreements; and
- (e) the Proposed SAAs (clause 5.2(n)).

Approval criteria in the QCA Act

The QCA Act states that the Authority may approve a draft access undertaking (DAU) only if it considers it appropriate having regard to each of the matters in the approval criteria (s.138(2)).

The condition for the application of paragraph 138(2)(c) has not been met as the owner and operator of the service are the same entity. The Authority has had regard to paragraphs 138(2)(f) (the effect of excluding existing assets for pricing purposes) and 138(2)(g) (the pricing principles in s.168A of the QCA Act), but as the system rules do not deal with pricing matters, it has not focussed on them.

The Authority has therefore given most weight to the following paragraphs of section 138(2) in making its draft decision:

- (a) the object of Part 5 of the QCA Act, which is to promote the economically efficient operation of, use of and investment in significant infrastructure by which services are provided, with the effect of promoting effective competition in upstream and downstream markets (s.69E);
- (b) the legitimate business interests of the owner or operator of the service;

- (d) the public interest, including the public interest in having competition in markets;
- (e) the interests of persons who may seek access to the service, including whether adequate provision has been made for compensation if the rights of users of the service are adversely affected; and
- (h) any other issues the Authority considers relevant.

These matters are discussed further in Chapters 2 to 5.

Publication of Draft System Rules

The Authority published Aurizon Network's draft system rules and invited stakeholders to make submissions.

The Authority received three submissions on the draft system rules – from Asciano, Rio Tinto Coal Australia (Rio Tinto) and BHP Billiton Mitsubishi Alliance/BHP Mitsui Coal (BMA).

In reaching this draft decision, the Authority considered Aurizon Network's proposal, and all stakeholder submissions.

1.3 The Authority's Assessment Process and Approach

The Authority has assessed the draft Capricornia system rules with regard to all of the criteria listed in 1.2 above.

Consistency with the undertaking

When Aurizon Network prepared the draft system rules to submit to the Authority for approval it was required to have regard for:

... the equitable operation of System Rules across Access Holders and Access Seekers (should they become Access Holders) and their Customers and the terms of Access Agreements (clause 7.1(c)(i)).

These are the same grounds for an affected party to make submissions to Aurizon Network in relation to, and ultimately to raise a dispute with the Authority against a subsequent change in the approved system rules (schedule G, appendix 1, clause (e)).

Aurizon Network is also required not to unfairly differentiate between access seekers in negotiating with access seekers for the provision of access or between access holders in providing access, including in relation to providing scheduling and train control services in accordance with the network management principles (clause 2.2(a)(iii)).

At the same time, the system rules need to be consistent with the network management principles, the purpose of which is to set out how Aurizon Network will:

- (a) perform scheduling, train control and associated services; and
- (b) provide capacity related information to access holders (clause 7.1(a) of the undertaking).

The undertaking provides that the purpose of the system rules is to provide greater detail on the way in which the network management principles will be implemented (schedule G, appendix 1).

The background to, and evolution of, the draft system rules outlined in section 1.1 indicates the draft system rules are to provide the flexibility required to maximise system throughput and to increase transparency, for all supply chain participants, about how scheduling decisions are made.

The undertaking sets out the terms under which access holders will receive their train service entitlements in the access agreement principles (schedule E) and standard access agreements (volume 2).

The undertaking also provides for the development of proposed standard access agreements which can be entered separately by users of rail haulage services to contract with Aurizon Network for access rights, and by railway operators to use some or all of the users' access rights (clause 5.2(n)).

The Authority therefore considers consistency with the undertaking requires consideration of whether the draft system rules are:

- (a) *equitable* – non-discriminatory treatment across access holders, access seekers and their customers;
- (b) *transparent* – provide greater detail and information on the way Aurizon Network will manage train scheduling, train control, and network capacity;
- (c) *consistent with Standard Access Agreements and Schedule E* – do not conflict with terms in standard access agreements; and
- (d) *consistent with clause 5.2(n)* – does not conflict with the terms of the Proposed Standard Access Agreements which can be entered by users of rail haulage services to be contracted directly with Aurizon Network for access rights without bearing liability and obligations for above-rail operational issues (clause 5.2(n)(i)).

Approval criteria in the QCA Act

In addition, the consideration of these matters is supported by the approval criteria in s.138(2) of the QCA Act:

- (a) *equitable* – non-discriminatory treatment across access holders, access seekers and their customers is a relevant issue under s.138(2)(a). It will promote the economically efficient operation of, use of and investment in, significant infrastructure by which services are provided, with the effect of promoting effective competition in upstream and downstream markets;
- (b) *transparent* – protecting the interests of access holders and access seekers (should they become access holders) by giving them the information they need to understand how their contracted entitlements and related capacity and services are being (or will be) delivered is a relevant issue under s.138(2)(h). The need for transparency to demonstrate that Aurizon Network is not abusing its monopoly power, or favouring its related party is also a relevant issue under s.138(2)(h); and
- (c) *consistent with clause 5.2(n)* – the Proposed SAAs provided for in clause 5.2(n) are a means of promoting effective competition in downstream markets, by providing end users with more flexibility to choose train operators to transport their coal, and therefore consistency with the Proposed SAAs is a relevant consideration under s.138(2)(a).

1.4 Structure of this Draft Decision

In evaluating Aurizon Network's system rules the draft decision has been structured as follows:

- (a) *Chapter 2* – assesses the capacity-related information the draft system rules have proposed that Aurizon Network will provide access holders and access seekers, and how the capacity impact of Aurizon Network's maintenance and construction activities will be conveyed to them;
- (b) *Chapter 3* – assesses the scheduling and day-of-operation procedures proposed in the draft system rules, and the method proposed for determining consumption of train service entitlements held by access holders;
- (c) *Chapter 4* – assesses the dispute-resolution process in the draft system rules and other matters, including the impact of cross-system traffic and the expected completion of the Wiggins Island Coal Export Terminal; and
- (d) *Chapter 5* – summarises the Authority's draft decision.

In forming its view on the draft Capricornia system rules, the Authority engaged Femol International Pty Ltd to provide technical advice on rail scheduling matters and the content of the system rules. The Authority has published Femol's report with this draft decision.

2. SUPPLY-CHAIN CAPACITY

The draft Capricornia system rules proposed that Aurizon Network would provide information on system capacity to supply chain stakeholders over long-term, medium-term and short-term planning horizons. Aurizon Network considered that this information complied with the undertaking's train planning principles.

Aurizon Network also proposed a methodology to deliver access holders' entitlements in subsequent periods when they did not receive their contracted level of service where maintenance and construction activities had reduced the amount of available system capacity.

Stakeholders were concerned about both of these proposals and, in particular, considered that Aurizon Network's proposed planning process was not transparent.

The Authority has reviewed whether Aurizon Network's draft Capricornia system rules have addressed the train-planning requirements set out in the network management principles. In doing so, the Authority has been mindful that the objective of system rules is to specify in greater detail the way in which Aurizon Network will plan, schedule and control the operation of train services.

Based on its review, the Authority considers that capacity planning in the system rules should be made more transparent. The Authority also requires amendments to Aurizon Network's proposed methodology to account for maintenance and construction activities. These measures will allow stakeholders to better understand the allocation of capacity within the Capricornia coal system and how maintenance and construction impact on this.

2.1 Introduction

The network management principles serve a number of purposes, including how Aurizon Network will provide capacity-related information to access holders. This chapter focuses on how the Capricornia system rules provide for Aurizon Network to show:

- (a) how capacity is demonstrated in the master train plan (section 2.2); and
- (b) the effect that maintenance and construction activities have on capacity (section 2.3).

2.2 Capacity and Master Train Plan

Background

The purpose of system rules is to specify in greater detail the way in which Aurizon Network will plan, schedule and control the operation of train services (see Chapter 1).

To do so, system rules should provide greater information on supply chain capacity, and how it will be used to deliver an access holder's TSEs. This is because a TSE is the fundamental product that an access holder purchases from Aurizon Network – it represents the right to operate a train over a specified duration, between a specified origin and destination, including any temporary stops on the network.

Access holders' ability to use their TSEs depends on a number of factors, including the quality and capacity of the infrastructure provided by Aurizon Network, as well as the amount of time that infrastructure is unavailable because of maintenance and construction work.

Above-rail operators are better-positioned to plan for long-term rollingstock investment and crewing requirements if they have accurate knowledge about capacity-related constraints.

The rail network is part of a coal supply chain that consists of a number of different elements. Capacity constraints in a coal supply chain may arise because of rail network related issues, but they may be caused by bottlenecks at the mine or the port or performance-related issues with above-rail operators. The impact of these constraints is often governed by the limited number of loading/unloading slots at a particular mine or port terminal respectively. System rules will better serve access holders if they provide for greater transparency on the capability of the whole supply chain, taking into account constraints that lie inside and outside the rail network.

A need to make capacity transparent

The undertaking requires that Aurizon Network prepare a master train plan (MTP) which details the existing capacity required to deliver access holders' TSEs, after having accounted for planned maintenance activities (schedule G, part A, 2(a)(iii)).

The network management principles require the MTP to show the time/distance relationship of train services and maintenance activities on the rail infrastructure of concern. Train services can be either *timetabled traffics* or *cyclic traffics* (coal-carrying train services are considered to be cyclic traffics in the undertaking).

Aurizon Network's MTP must also demonstrate there is sufficient network capacity to manage train paths (i.e. the use of part of the network for a specified period of time) such that it can fulfil the TSEs of all access holders. The undertaking states that the MTP must identify:

- (a) the train paths allocated to cyclic traffics that reflect the existing capacity required for the maximum level of TSE operation (but do not necessarily reflect the train paths operated on any given day); and
- (b) the system paths in an individual coal system that are available for scheduling cyclic traffics from a specified location within that coal system to the nominated unloading facilities (schedule G, part A, 2(a)(ii)).

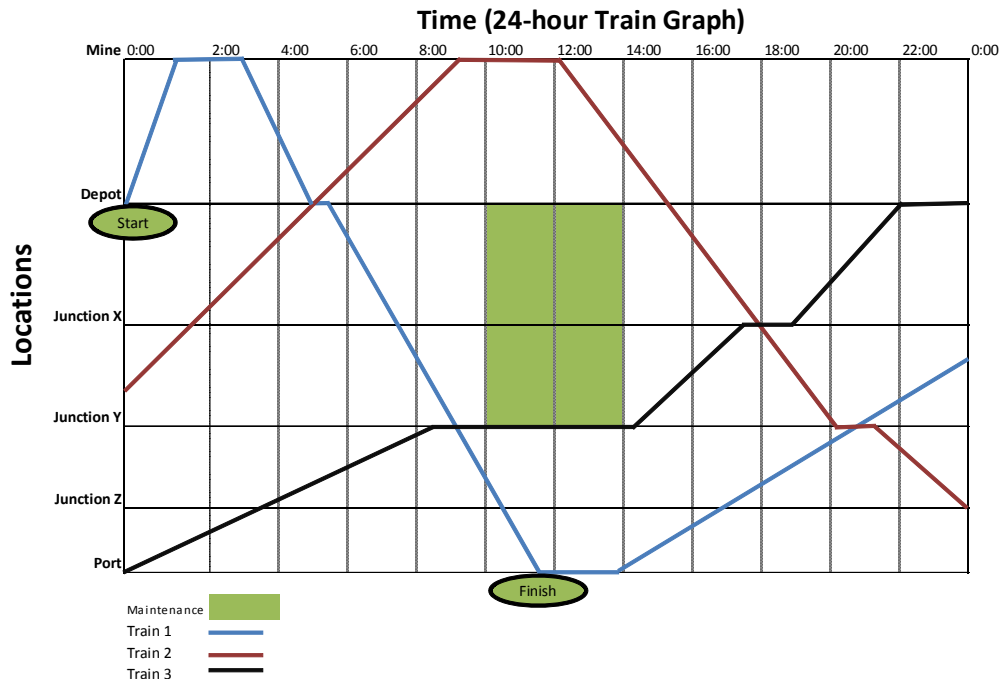
An illustration of a train graph which shows system paths and train paths is set out in Box 2.1.

This section 2.2 assesses whether Aurizon Network's draft system rules fulfil the network management principles' requirements for demonstrating capacity, by addressing:

- (a) the MTP; and then
- (b) paths, including system paths, and the characteristics of the trains that use them.

Box 2.1: Train Graph

A 'train graph' is a widely-accepted method in the rail industry for illustrating network capacity and how it is used. This is described in the 2010 undertaking as 'a form that indicates the time/distance (location) relationship of the Train Services and other activities on the Rail Infrastructure in question' (schedule G, part A, 2(a)). An illustrative example of a train graph is shown below:



The train graph shows:

- a. train stops on the vertical axis;
- b. a 24-hour period on the horizontal axis; and
- c. lines which represent 3 train paths on which three trains are travelling over the 24-hour period.

Train 1 travels more quickly than the other trains; shown as a steep slope of its train path on the graph.

Train 1's system path (blue line beginning at the depot (i.e. 'Start') and concluding at the port (i.e. 'Finish')) is:

1. midnight (00:00 am): Leave depot.
2. 1:45 am: Arrive at Mine. The loading process takes 1hr and 15 mins.
3. 3:00 am: Depart Mine.
4. 5.00 am to 5.30 am: Reach Depot and wait for Train 2 to cross until 5.30 am because of single track. Crew changes and meal breaks occur.
5. 5.30 am: Leave Depot.
6. 9.00 am: Cross Junction Y while Train 3 waits for it to pass.
7. 11.45 am: Arrive at port.

Track maintenance work is done between Depot and Junction Y from 10.00 am to 2.00pm (14:00 hours) that day (shown as green rectangle).

Source: QCA

Master Train Plan

Aurizon Network's proposal

In its draft system rules, Aurizon Network stated that:

System rules aim to provide transparency around the planning and scheduling decision making process. They are not intended to limit flexibility in the supply chain, but to create certainty in respect to access entitlements for Access Holders, ensuring [Aurizon] Network's compliance with regulatory and contractual obligations (Aurizon Network, sub. no. 1: 4).

and:

The purpose of the System Rules is to provide a transparent planning and scheduling process which is clearly understood by all stakeholders (Aurizon Network, sub. no. 1: 7).

Aurizon Network said it had prepared an MTP, to comply with the train-planning requirements in the network management principles, that detailed:

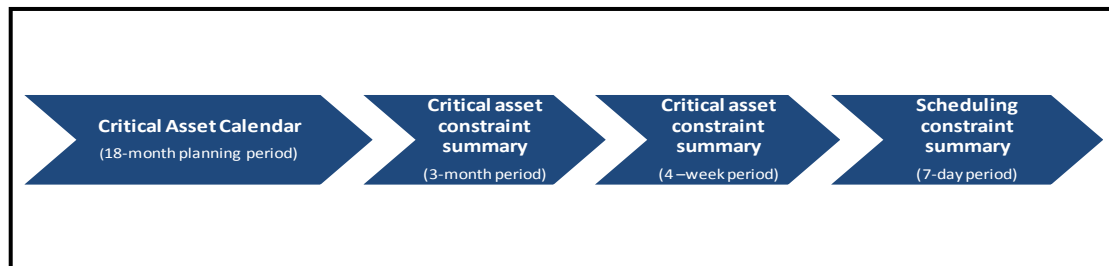
- (a) the paths that were available for scheduling cyclic traffic; and
- (b) the time allocated for planned possessions (i.e. the temporary closure of the rail infrastructure to conduct maintenance and construction activities) and timetabled traffic (Aurizon Network, sub. no. 1: 10).

Aurizon Network (sub. no. 1: 10-11; 13-14) said this capacity information was provided to access holders in three documents, the:

- (a) *critical asset calendar (CAC)* – gives a long-term summary of planned maintenance and construction activities over a long-term period (typically 18 months). It shows proposed network closures and other constraints, including shutdowns at non-Aurizon Network facilities such as mines and ports;
- (b) *critical asset constraint summary* – provides medium-term summaries of network closures and other constraints (in three-month and four-week versions³) and contains information similar to that contained in the CAC; and
- (c) *scheduling constraint summary* – shows usable system capacity and pathing availability over a short-term horizon (i.e. seven-day period) to assist access holders to make train orders for a particular week of operation.

Figure 2.1 shows the relationship between the documents.

³ The principal distinction between the three-month and four-week critical asset constraint summaries is that the latter document is more rigid because it is produced closer to the time the planned events will take place. Specifically, for the four-week critical asset constraint summary, 21 days are intended to be 'locked down' for maintenance. Aurizon Network has proposed that the maintenance for the final week in the period be indicative.

Figure 2.1: Aurizon Network's capacity-related documents

Source: QCA and Aurizon Network's draft system rules

The CAC guides how the critical asset constraint summaries are prepared. In turn, the information in the critical asset constraint summaries drives how the scheduling constraint summary will appear.

Aurizon Network said the scheduling constraint summary would show, on a weekly basis (i.e. Monday to Sunday), the:

- (a) number of available below-rail network paths;
- (b) number of available indicative system paths;
- (c) surge capability in the relevant branch lines;
- (d) dates and times of all planned network outages; and
- (e) contracted timetabled passenger, freight and livestock services (Aurizon Network, sub. no. 1: 13-14).

Aurizon Network proposed to publish all the capacity constraint documents via the Capricornia Coal Chain portal, which is an internet site available to supply chain stakeholders (Aurizon Network, sub. no. 1: 11). Aurizon Network said stakeholders can provide feedback on these documents so that the information contained in them can be updated regularly.

Stakeholders' comments

Stakeholders have indicated to the Authority that they were unable to form a view on the proposed long-term and medium-term planning process (i.e. the CAC and critical asset constraint summaries) as Aurizon Network had not been transparent about its MTP processes in stakeholder consultation sessions. Stakeholders also said that while they did have access to the Capricornia Coal Chain portal, the information Aurizon Network published in it had tended to be out of date.

Separately, stakeholders requested that Aurizon Network provide access to an MTP that showed all Capricornia-coal-chain system paths, so that above-rail operators could assess system capacity and match it with their long-term rollingstock and crewing plans to meet end users' needs. In particular, stakeholders said this MTP should be in the form of a train graph. Stakeholders said the scheduling constraint summary proposed by Aurizon Network did not offer the level of transparency of system capacity that an MTP would provide.

Authority's analysis

Capacity-related information should give access holders confidence that the network can accommodate their train services. It should also indicate the extent to which the network has buffer capacity for periods with high operational variability.

The Authority therefore considers it is important for Aurizon Network to transparently provide capacity-related information to access holders in line with the network management principles (clause 7.1(a)(ii) of the undertaking). The network management principles require the MTP to show time allocated to planned possessions and timetabled traffics and to identify paths allocated to cyclic traffics and system paths available for scheduling cyclic traffics (schedule G, part A, 2(a)(ii)).

Aurizon Network has provided limited information on how it intends to detail the existing capacity required to deliver access holders' TSEs, after having accounted for planned maintenance activities.

Aurizon Network's Capricornia system rules submission does not include any single document that it said was an MTP. Rather, Aurizon Network has proposed that the role of the MTP will be performed by three documents (i.e. the CAC, critical asset constraint summaries and scheduling constraint summary) that will indicate pathing availability and system capacity to access holders.

Given this, the Authority has assessed whether these three train planning documents meet the undertaking's requirements for preparing an MTP.

The Authority accepts that Aurizon Network's scheduling constraint summary satisfies some of the technical requirements of an MTP, namely that it shows the time allocated for planned possessions and for timetabled traffics running on the main rail line.

However, it does not show the time/*distance (location)* relationship of planned possessions and train services, which are a key requirement outlined in the network management principles (e.g. a train graph, as illustrated in Box 1). In this regard, the Authority accepts Femol's advice that:

A MTP for the Capricornia coal system should include timetabled train paths overlaid with cyclic train paths based on reference-train characteristics and sectional run times referred to in the Undertaking. A MTP is usually developed as a time and motion graph and can be presented on a daily or weekly basis in either electronic or hard-copy forms. As a minimum the MTP should include the maximum number of train paths available on any given day considering all the system constraints including track configuration, signaling infrastructure and other rail safe working factors (Femol: 4-5)

... and be based on the trunk network for each route and include the following:

- all crossing loops, spur junctions, intermediate signals and refuge sidings*
- locations and type of trackside equipment*
- all fixed timetabled traffic*
- domestic cyclic traffic*
- relevant system constraints (infrastructure and operational)*
- all generic cyclic coal train paths (Femol: 6).*

A graphical depiction of the time/distance (location) relationship of train services (and planned possessions) is also consistent with industry's interpretation of what information an MTP is supposed to provide.

The Authority considers Aurizon Network's proposal to provide capacity information through the critical asset calendar and constraint summaries, rather than an MTP, is not sufficiently transparent promote the efficient use of or investment in rail infrastructure. It is therefore not consistent with the object of the access regime in the QCA Act, which is to 'promote the economically efficient operation of, use of, and investment in significant infrastructure with the effect of promoting effective competition in upstream and downstream markets' (s.138(2)(a)).

If Aurizon Network provides an MTP that shows capacity, and how its contractual TSE obligations fit into that capacity, it can demonstrate to access holders that it can meet all of those obligations. It can also inform access seekers whether there is spare capacity. This provides a degree of certainty to access holders that capacity is being managed appropriately and that access to the network is not being oversold.

The Authority also notes stakeholders' concerns about the transparency of the documents that Aurizon Network has said would provide capacity-related information, and whether they would be up to date on the portal. Stakeholders have said the CAC and critical asset constraint summaries (used to inform the scheduling constraint summary) published on the Capricornia Coal Chain portal in the past have tended to be out of date.

Irrespective of whether this is an historically accurate claim, the Authority considers it important that access holders have confidence that the information published on the portal is accurate and is updated regularly and transparently. The Authority requires Aurizon Network's draft system rules to indicate that documents Aurizon Network uploads on the Capricornia Coal Chain portal are accurate and will be updated in a timely fashion, and that access holders and supply chain participants will be notified of those updates.

In addition to concerns raised by stakeholders, the Authority notes that there is some uncertainty in other elements of the planning processes in the draft system rules. In particular, the Authority considers that the draft system rules do not provide any detail on the rights of access holders and infrastructure service providers to comment on the documents uploaded on the Capricornia Coal Chain portal. This is necessary as the implementation of these planning documents impacts the entire supply chain.

In particular, the documents include not just Aurizon Network's shutdowns but those of other supply chain participants. As such, it is reasonable that participants be given an opportunity to correct any errors, or better align their shutdowns with those of other supply chain participants. This is consistent with the efficient and transparent operation of the planning processes, and should improve the quality of the information on Capricornia Coal Chain portal.

The Authority requires the draft system rules to reflect these points.

Draft Decision 2.1 - Master train plan

The Authority requires the draft system rules be amended such that:

- (a) they require Aurizon Network to provide a train graph of the Capricornia rail network on which available cyclic train paths (including system paths) are overlaid on the timetabled train paths and paths set aside for planned possessions, in a manner consistent with the network management principles.**
-

The train graph must show:

- (i) **train paths (including system paths) allocated to cyclic traffics, where such train paths reflect the existing capacity required for the maximum level of TSE operation (but may not necessarily reflect the train paths those train services will operate on a given day); and**
 - (ii) **the system paths (which have been declared in the system rules) in an individual coal system that are available for scheduling cyclic traffics from a specified location within that coal system to the nominated unloading facilities;**
- (b) **they specify that Aurizon Network will update documents on the Capricornia Coal Chain portal in a timely fashion, and notify access holders and supply chain participants whenever the documents are updated; and**
 - (c) **access holders and other supply chain members are provided with rights to participate in the development of the planning documents, and provide that Aurizon Network will treat each access holder equitably.**
-

Paths and Train Characteristics

Train paths are the way in which TSEs are delivered. They have a number of characteristics, including an origin, a destination, and the time taken for the access holder's train to travel between those points. Those characteristics, usually expressed in terms of the operation of a standard 'reference train', help determine the carrying capacity of that part of the network. By contrast, slower or smaller trains will tend to reduce network capacity, as will running trains with different characteristics (such as acceleration, braking and maximum speed) on the same network.

Aurizon Network's draft system rules refer to both *system paths* and *below-rail network paths*.

System paths link system rules and supply-chain capacity. A system path, as defined in the undertaking, links a specific origin in the individual coal system to a nominated unloading facility i.e. a terminal. Above-rail dwells, which refer to the temporary stopping of a train on the network (e.g. for crew changes and provisioning), are not explicitly mentioned in this definition. Aurizon Network can declare system paths in the system rules.

Below-rail network paths differ from system paths in that they are not necessarily linked to the availability of a specific origin or destination at a mine or port. There can therefore be many more network paths than system paths, with the only constraint on the number of network paths on the mainline being the separation (headway) between trains.

This section considers whether Aurizon Network's proposal for system paths, train characteristic descriptions and other path-related matters is consistent with the undertaking's requirements and follows best-practice industry standards.

Aurizon Network's proposal

Aurizon Network proposed that its MTP identify *below-rail network paths* and include the number of those paths in its scheduling constraint summaries. Aurizon Network defined below-rail network paths as generic one-way paths available to all trains on the network to

use, that are based on the reference train's⁴ section run times between two points on the network.

Aurizon Network proposed that the relevant section for network paths for the Blackwater coal system is the run starting at Bluff and concluding at Callemondah (with the relevant terminal, RG Tanna, about 4 km away). Aurizon Network also said that the relevant section for network paths for the Moura coal system is from Dumgree to Callemondah (Aurizon Network, sub. no. 1: 10) (see map: Figure 1.1, p. 2).

Aurizon Network defined *system paths* in the draft system rules as below-rail network paths aligned with a specific mine loading slot and port unloading slot, plus above-rail dwells as contracted for in the various access agreements. It said:

[t]his serves to align rail and port capacity so as to facilitate the optimal use of resources. The key objective of the system path concept is to optimise supply chain throughput through more closely linking rail Access Rights to port capacity availability (Aurizon Network, sub. no. 1: 10).

Stakeholders' comments

Asciano said the primary objective of a system path was to optimise supply-chain throughput by connecting rail-access availability to port-capacity availability (Asciano, sub. no. 3: 6).

Asciano disagreed with Aurizon Network's position that below-rail network paths for the Blackwater system should start at Bluff and conclude at Callemondah. Asciano said that the concluding point for a below-rail network path should be the relevant terminal (i.e. RG Tanna or other terminals around it).

Asciano also said the indicative section run times provided by Aurizon Network for system paths should be clearer as the proposed dispatch intervals⁵ were not consistent with the sectional run times observed in practice for any one network section. Further, Asciano requested clearer information on how above-rail and below-rail delays would be treated in relation to the dispatch intervals (Asciano, sub. no. 3: 6).

Asciano also said the system rules should require Aurizon Network to specify the number (or proportion) of trains which were deemed to be reference trains, and whether the use of non-reference trains was increasing/decreasing the number of system paths available in the Capricornia coal chain since this affected system capacity (Asciano, sub. no. 3: 7).

Authority's analysis

The Authority accepts Aurizon Network's position that the purpose of system paths is to allow for optimising supply chain throughput by closely linking rail access rights to the availability of port capacity. Given this, the Authority considers that system paths should account for whole-of-supply-chain capabilities so that the efficiency of the underlying supply chain can be shown effectively.

The Authority has considered whether Aurizon Network's definitions of below-rail network paths and system paths in the draft system rules are consistent with the undertaking's requirements. The Authority has also assessed whether any inconsistencies are likely to make Aurizon Network's capacity-related information less useful to access holders.

⁴ A reference train has operating characteristics, including section run times, loading and unloading times, and other factors, which are defined in Schedule F of the undertaking.

⁵ Dispatch intervals, or headways, refer to the average durations of time between trains running on the network in the same direction.

The undertaking says a system path is to conclude at a nominated unloading facility (“System Path” definition). Callemondah is not a nominated unloading facility – it is a holding yard near the RG Tanna terminal. The Authority therefore accepts Asciano’s view that the appropriate ending point for a system path (and below-rail network path) in the Capricornia coal system should be RG Tanna (or another terminal), where coal can be unloaded.

In addition, the Authority does not accept Aurizon Network’s proposal that below-rail network paths start at Bluff for the Blackwater system and Dumgree for the Moura system. In each case, those locations are the first point on the network that all trains, regardless of their origin, pass on their way to the port. The Authority considers that capacity constraints do not only emerge at points on the rail network that are used by all train services; congestion can be readily observed at points on the rail network further ‘upstream’ than those proposed in the draft system rules. In this regard, Femol said that:

... the generic train paths [should] be extended to the furthestmost point on the network where most coal train operators have exited the trunk system and capacity and the allocation of TSEs is no longer an issue.

- *Blackwater System from Burngrove to Ports.*
- *Moura System from Earlsfield to Ports (Femol: 7).*

The Authority considers this reasonable, and requires that the starting point of a below-rail network path for the Blackwater system should be Burngrove rather than Bluff; for the Moura system, it should be Earlsfield rather than Dumgree.

The Authority notes that Aurizon Network has proposed to base section run times on the reference train service’s characteristics. It is therefore important that the draft system rules be clear on what the reference train service will be. While the draft system rules make some reference to the reference train characteristics in the undertaking, they do not include any reference to the descriptions of system-specific characteristics. The Authority requires that the draft system rules clearly state that the characteristics that apply will be those set out in Schedule F, Part B of the undertaking – clause 5.2 for Blackwater, and clause 7.2 for Moura.

The Authority also accepts Asciano’s concern that it is not clear how Aurizon Network proposes to treat above-rail and below-rail delays in relation to dispatch intervals. Given the importance of dispatch intervals (or headways) in determining system capacity, Aurizon Network needs to better explain how it will account for headways and delays, and report on them as part of the overall information provided to access holders and their customers.

The Authority requires that the system rules should require Aurizon Network to report for each month the number and proportion) of trains that have been deemed to be reference and non-reference trains, and whether the use of non-reference trains has increased/decreased the number of system paths available in the Capricornia coal chain. While the fleet mix reflects above-rail decisions, it affects the efficient use of below-rail capacity. Aurizon Network, as the below-rail network operator, is best placed to compile and report this information.

The Authority finally notes that Aurizon Network’s proposed definition of system paths includes above-rail dwells. Above-rail dwells are specific to each access holder and each access holder may have different dwell time requirements. The impact of longer dwell times is often reflected as a reduction in system capacity. Since system paths need a degree of commonality in order to be ‘sold’ to access holders, the Authority considers the definition of system paths should only include above-rail dwells that reflect those in the reference train service specified in the undertaking. Clearly, an access holder with significantly longer

dwelling times is likely to have a greater impact on system capacity than an access holder with shorter dwelling times.

Given this, the Authority requires Aurizon Network to amend the definition of system paths to include above-rail dwells consistent with the reference train characteristics in the undertaking.

Draft Decision 2.2 – Paths

The Authority requires the draft system rules be amended so:

- (a) below-rail network paths and system paths conclude at RG Tanna (or any relevant future port) instead of Callemondah;**
 - (b) below-rail network paths begin at Burngrove, instead of Bluff, for the Blackwater system;**
 - (c) below-rail network paths begin at Earlsfield, instead of Dumgree, for the Moura system;**
 - (d) they specify the reference train service will be that described in Part B of Schedule F of the undertaking, including clause 5.2 for Blackwater trains, and clause 7.2 for Moura trains;**
 - (e) they specify the treatment of above-rail and below-rail delays, and their relationship to the actual dispatch intervals that are achieved on the day of operation, must be transparent and equitable;**
 - (f) Aurizon Network is required to report, for each month:**
 - (i) how above-rail and below-rail delays have affected dispatch intervals;**
 - (ii) the number and proportion of reference and non-reference trains that have operated; and**
 - (iii) how the use of non-reference trains has increased/decreased the number of system paths available in the Capricornia coal chain; and**
 - (g) the definition of system paths includes above-rail dwells consistent with the reference train characteristics in the undertaking.**
-

2.3 Effect of Maintenance and Construction

Background

Maintenance and construction activities are a normal and vital part of operating a network. Maintenance is necessary for the safe operation of the network, while construction is needed to increase capacity to meet any anticipated growth in demand for above-rail services. Maintenance and construction activities result in temporary capacity reductions in parts of the network. This too is a normal part of operating a network. However, the impact on the network, its customers and other stakeholders can be reduced if the impact of these works are known in advance and coordinated with other participants in the supply chain.

The network management principles require Aurizon Network to have regard to *planned possessions*. To be consistent with the network management principles, it is important that any set of system rules must also have regard to planned possessions⁶. In the case of unplanned maintenance works (which are typically triggered by serious faults in the rail infrastructure), the network management principles provide for Aurizon Network to undertake emergency or urgent possessions to remedy them.

⁶Planned possessions relate to the temporary closure and/or occupation of the rail infrastructure by Aurizon Network to perform maintenance and construction activities.

As indicated in section 2.2, the undertaking provides that Aurizon Network's long-term train planning process (i.e. its MTP) must detail the times allocated to planned possessions. In the event Aurizon Network needs to amend details of planned possessions scheduled in the MTP, it must abide by the network management principles, including rules for consulting and negotiating with access holders about such amendments. This is important because planned possessions outlined in the MTP affect throughput and system capacity.

The impact of maintenance and construction activities becomes increasingly important when approaching the planning period for a particular week of operation. Access holders require information about these activities in order to make informed decisions about the train orders they have to submit to Aurizon Network. This information enables access holders to make more considered decisions when proposing schedule times for train orders they submit in line with their contractual entitlements.

Objective of system rules

The link between system rules and planned possessions is the extent to which system-path availability is affected by maintenance and construction activities, and how such information is conveyed to access holders. System rules that improve the coal supply chain's efficiency would require Aurizon Network to undertake its maintenance and construction planning process transparently and equitably.

This section 2.3 assesses whether the draft system rules provide for Aurizon Network to convey the effect of maintenance and construction works on capacity transparently to access holders, in a manner that is consistent with the terms of access agreements, and results in equitable outcomes across access holders. The analysis focuses on these issues in the context of the period before the weekly train plan takes effect. In doing so, this section 2.3 considers Aurizon Network's proposed:

- (a) scheduling constraint summary; and then
- (b) its methodology to provide additional paths to access holders, to make up for capacity loss arising from maintenance and construction activities (the maintenance multiplier).

Scheduling constraint summary

Aurizon Network currently provides a weekly *scheduling constraint summary* to access holders and supply chain participants, which details the date and time of all planned network outages for a particular week of operation.

Aurizon Network's proposal

As explained in section 2.2, Aurizon Network has not submitted its MTP as part of its proposal but has supplied three documents which outline its long-term, medium-term and short-term train planning processes.

Aurizon Network has proposed rules on how maintenance and construction activities will be treated in the run-up to finalising the weekly train plan (WTP). In doing so, Aurizon Network indicated that its train planning and WTP processes (in which the maintenance and construction activities are relevant) have been produced in accordance with the network management principles.

Aurizon Network proposed in the draft system rules that it would continue to provide a weekly scheduling constraint summary to access holders.

In developing the scheduling constraint summary, Aurizon Network indicated it would coordinate maintenance planning activities with the adjoining network manager (Queensland Rail) to ensure minimal disruption for train services using networks operated by these two entities (Aurizon Network, sub. no. 1: 11). In this regard, Aurizon Network noted it was important to define the interaction between the networks managed by itself and Queensland Rail to clearly outline how the movements of trains running across both networks would be coordinated (Aurizon Network, sub. no. 2: 1).

The 21 days of locked-down maintenance in the four-week critical asset constraint summary will inform how the scheduling constraint summary is produced. Aurizon Network said in the draft system rules that all agreed planned maintenance and construction requests will take priority in the scheduling process over any train service.

Stakeholders' comments

Stakeholders were concerned about the lack of transparency around the capacity impacts of maintenance and construction works.

BMA said the system rules should place strict criteria and controls on when Aurizon Network could deem maintenance to be 'unplanned'. BMA noted the amount of capacity consumed by unplanned maintenance in the Capricornia coal system had been approximately the same as that by planned maintenance (BMA, sub. no. 4: 6).

Asciano had broad concerns about transparency of maintenance activities, namely that:

[t]he draft Rules identify that the allocation of maintenance train paths takes priority above the scheduling of TSEs. [Aurizon] Network should be more transparent as to the capacity impacts of maintenance and how they management maintenance while continuing to deliver TSEs (Asciano, sub. no. 3: 5).

Similarly, BMA said there was inadequate information on how access holders could manage their TSE utilisation to the level contracted given the lack of transparency regarding maintenance and construction impacts controlled by Aurizon Network (BMA, sub. no.4: 6).

Regarding interaction with adjoining infrastructure, Asciano said Aurizon Network's operational interface needed to align itself clearly with maintenance activities undertaken by Queensland Rail (Asciano, sub. no. 3: 5). Asciano also noted that TSEs were offered on monthly terms by Aurizon Network while those of Queensland Rail were based on weekly terms.

Authority's analysis

Maintenance and construction activities are necessary for the safe operation and augmentation of the network to provide services to above-rail operators and end users. Thus, the Authority accepts Aurizon Network's position that planned maintenance and construction activities should take priority over the scheduling of any train service.

However, the Authority considers that Aurizon Network must signal to access holders and other infrastructure providers when it plans to maintain and augment the network, so these parties can better manage their operations. Aurizon Network must consult with access holders in a manner that is consistent with the network management principles. In its assessment, the Authority has been mindful that an important role of system rules is to improve the operation of the rail network and, in turn, the broader coal supply chain.

In this context, it is important that the system rules set out Aurizon Network's consultation obligations for maintenance-related activities.

Consultation obligations under the network management principles

The network management principles do not require Aurizon Network to consult with access holders if a planned possession is cancelled (schedule G, part A, 2.b(iii)). However, there are stricter consultation requirements for newly created planned possessions and/or modifications to existing planned possessions being included in the MTP. These depend on whether the amendments are consistent with the terms of the access holder's access agreement.

The network management principles provide that, where Aurizon Network makes an amendment that affects an access holder's TSE in a way that is consistent with the access agreement, Aurizon Network must notify the affected access holders but need not obtain their consent. Where the changes are not consistent with the access agreement, Aurizon Network must secure the agreement of the affected access holder, provided the agreement is not unreasonably withheld by that access holder.

The network management principles also provide that, in the case of unplanned maintenance activities, Aurizon Network can undertake emergency and urgent possessions, on a case-by-case basis, with relatively short notice periods – these can be scheduled as little as two business days before the daily train plan is finalised. Emergency possessions can also be scheduled on the day of operation, provided an affected access holder is notified about it before its relevant train services are scheduled to commence.

Aurizon Network's compliance with consulting obligations

Aurizon Network indicated that its scheduling constraint summary complies with the consulting requirements in the network management principles (schedule G). However, the Authority considers Aurizon Network has provided very limited detail on how it complies with these requirements.

The Authority notes the scheduling constraint summary is proposed to take account of maintenance variations that are requested by mines and ports before this summary is developed (Aurizon Network, sub. no. 1: 14). However, the draft system rules are silent on other aspects of planned and unplanned maintenance activities which are supposed to involve consultation with access holders.

In light of the silence of Aurizon Network on these matters, the Authority is unable to assess whether the draft system rules conform with the network management principles in respect of unplanned maintenance activities. Similarly, the Authority is also unable to assess amendments to planned possessions affecting an access holder's TSE in a way that is not consistent with the access holder's access agreement.

It is inadequate that Aurizon Network contend that it complies with the consulting obligations in the network management principles because this does not provide access holders with confidence that the draft system rules will operate equitably across access holders, as required in matters to which Aurizon Network must have regard in developing system rules (7.1(c)(i)).

The Authority also considers Aurizon Network's proposed process for developing the scheduling constraint summary is not sufficiently transparent that access holders will know what is happening on the network, so they can efficiently manage their operations, and coordinate their activities with other supply chain participants. This is a relevant consideration under the approval criteria of the QCA Act, which include 'any other issues the Authority considers relevant' (s.138(2)(h)).

The Authority therefore requires Aurizon Network to amend the draft system rules to include a clear process for consulting with access holders on:

- (a) unplanned maintenance; and
- (b) scheduled maintenance that affects an access holder's TSE in a way that is not consistent with terms of the relevant access agreement.

Other matters

The draft system rules indicated the scheduling constraint summary contains information on maintenance and construction activities scheduled in a particular week of operation. In this context, Asciano and BMA said the draft system rules were unclear how maintenance and construction work would compromise Aurizon Network's ability to deliver contracted TSE obligations.

The Authority has therefore considered whether the proposed scheduling constraint summary is sufficiently transparent to allow access holders to understand how capacity lost to maintenance and construction activities will affect their TSEs.

Aurizon Network indicated that the number of available network paths and system paths would be known to access holders via the scheduling constraint summary (Aurizon Network, sub. no. 1: 13). However, the Authority is concerned this level of transparency will not provide enough information to access holders. In this regard, the Authority accepts Femol's view that:

[t]he Scheduling Constraints Summary should contain as a minimum:

- *details on locations and times of any planned disruptions*
- *reasons for any changes to 21 day lock down period*
- *any proposed contingency plans should track not be restored on time*
- *number of system paths available per day*
- *impact on Access Holders' TSEs*
- *maintenance multiplier figure to be applied for weekly period. (Femol: 10)*

The Authority therefore requires the draft system rules specify that the scheduling constraint summary includes that information.⁷

Asciano has also said Aurizon Network's maintenance activities should be aligned with those of the adjoining network. The Authority notes Aurizon Network's proposed long-term and medium-term summary documents (i.e. the CAC and critical asset constraint summaries) include planned non-Aurizon Network outages. As these will be published on the Capricornia Coal Chain portal, access holders and other infrastructure providers will be able to raise issues about coordination during the process leading up to the publication of the scheduling constraint summary.

The Authority notes Asciano's comment that TSEs are specified on a monthly basis for Aurizon Network and on a weekly basis for Queensland Rail. However, all train services

⁷ The Authority notes that the times of planned disruptions and the number of system paths available per day are already proposed to be included the scheduling constraint summary, and that the maintenance multiplier is to be provided in monthly reports to be distributed by Aurizon Network.

running on Queensland Rail's network (including those for services that also use Aurizon Network's tracks) are for timetabled services. The weekly process for scheduling coal trains with TSEs specified on a cyclic basis is not relevant to those timetabled traffics, so it is not necessary that the contracting periods be aligned.

Draft Decision 2.3 - Scheduling constraint summary

The Authority requires the draft system rules be amended so:

- (a) they detail how Aurizon Network will undertake the consultation process relating to:
 - (i) unplanned maintenance; and
 - (ii) amendments to scheduled maintenance that affect an access holder's TSE in a way which is not consistent with terms of the relevant access agreement; and
 - (b) the scheduling constraint summary includes:
 - (i) details on locations and times of any planned disruptions;
 - (ii) reasons for any changes to the 21-day maintenance lock-down period;
 - (iii) contingency plans that will be implemented if possessions result in track not being ready for services to resume on time, including any communication process to notify access holders about these delays; and
 - (iv) the maintenance multiplier figure to be applied each week.
-

Maintenance multiplier

Aurizon Network's maintenance and construction activities will not happen evenly through the year. This means there will be times when access holders are not be able to use their pro-rata entitlement of paths in a particular week, even though there is enough capacity to provide those paths during the full year.

Aurizon Network's proposal

Aurizon Network proposed to adjust the availability of paths to account for the impact of planned maintenance on available paths in a particular week. In particular, when planned maintenance prevents Aurizon Network from delivering an access holder's train services for the relevant week, Aurizon Network proposed that a *maintenance multiplier*⁸ will be used to adjust TSE obligations upwards and be applied on a day in which no maintenance activities occur (Aurizon Network, sub. no. 1: 14).

Aurizon Network proposed that its maintenance multiplier will account for the loadout capability of each mine. The maintenance multiplier is proposed to be communicated to access holders for each month via monthly reports (Aurizon Network, sub. no. 1: 14).

While Aurizon Network did not provide an example of how this might work in practice, the illustration in Box 2.2 seeks to do so.

⁸ Maintenance multiplier = Total monthly paths available on a clear month / (Total monthly paths available on a clear month - Paths not available)

Box 2.2: The Maintenance Multiplier

Suppose an access holder's nominal weekly TSE is 14 paths per week. This means its nominal daily TSE figure would be $14/7 = 2$ paths.

Suppose the maintenance multiplier is 1.1; this means that the adjusted nominal daily TSE figure would be $2 \times 1.1 = 2.2$.

The adjusted weekly TSE is $2.2 \times 7 = 15.4 = 16$ (rounded up).

Because of the impact of the planned maintenance, access holders are entitled to two additional paths (16 instead of 14) for the week. These paths can be consumed on days in the week in which maintenance is not scheduled.

For example, an access holder can choose to consume 3 paths for two of the days and 2 paths for the balance of five. This, as Aurizon Network's draft system rules have suggested, can be done without penalty to the access holder's TSE consumption.

Stakeholders' comments

Stakeholders said the maintenance-multiplier approach proposed by Aurizon Network lacked flexibility in some important areas.

Asciano argued the draft system rules did not account for the impacts of maintenance on pathing arrangements on the days preceding or following the day in which the maintenance would be conducted. Asciano said remedying this:

... may require an adjustment being made to the maintenance multiplier to allow for additional paths which are used outside the maintenance period but which are unused due to the impact of maintenance on train movement (Asciano, sub. no. 3: 8).

Asciano noted that Aurizon Network's proposed maintenance calendar for 2012 provided for an average of 28.8 operating days per month that were maintenance-free. Asciano said this did:

... not align with the [Aurizon] Network TSE approach where monthly paths are based on a 30 day month. The Rules should expand on how maintenance activity impacts on both TSE calculation and the availability of paths for TSE consumption (Asciano, sub. no. 3: 5)

Asciano also said that, in addition to accounting for the loadout capability of each origin, the maintenance multiplier must have regard for the unloading capability of the destination port and the system-path capability of the above-rail operator. BMA echoed Asciano's concerns, and said Aurizon Network's maintenance multiplier allowed for access holders to have some flexibility to vary train orders within a month to meet the adjusted TSEs (BMA, sub. no. 4: 5).

Separately, Asciano said that if Aurizon Network could smooth TSE consumption over time to manage maintenance, above-rail operators should also have flexibility to smooth their TSE consumption over similar periods (Asciano, sub. no. 3: 5).

Authority's analysis

The basic idea of the maintenance multiplier is simple: when maintenance or construction activities prevent an access holder from receiving its train service entitlement during a particular period, those 'lost' paths will be provided at another time in the same month, when there is sufficient capacity.

The Authority considers that the operation of Aurizon Network's maintenance multiplier lacks clarity. For example, Aurizon Network has proposed that the number of paths assigned through the maintenance multiplier will account for the loadout capability of each mine. However, the draft system rules have not indicated how the multiplier will do this, or whether it will take account of other technical constraints and if not, why not. In addition, Aurizon Network has not said whether and how it would adjust access holders' TSEs in respect of unplanned maintenance (i.e. emergency or urgent possessions) consuming system capacity.

It is also noted that the function of the maintenance multiplier is already achieved to a considerable degree through the Contested Train Path Decision-making Process (schedule G, appendix 2). This is described in greater detail in section 3.2 of this draft decision. However a key part of the process is that, among other measures, an access holder that is further behind in its month-to-date TSE entitlement (for below-rail causes including maintenance possessions) will receive priority in path allocation, followed by an access holder further behind on its year-to-date entitlement.

The maintenance multiplier has the effect of sitting above the Contested Train Path Decision-making process, by giving an access holder extra paths in weeks where it is not affected by maintenance activities. In practice, one of the major outcomes of using the maintenance multiplier is that the 'missed paths' could be made up before the maintenance disruption, as well as afterwards.

It is apparent that there exists significant degree of uncertainty around the rationale underlying the concept, scope and application of the maintenance multiplier – Aurizon Network's submission is not particularly helpful in clarifying or explaining these matters. Accordingly, the Authority has sought to specify what, as a minimum, stakeholders need to understand in order to be comfortable with the proposal. These concerns are split into matters of transparency and flexibility.

Transparency

The Authority considers that where access holders have received less than their contracted train paths during a month, due to maintenance and construction activities, Aurizon Network should make up for those lost paths.

Aurizon Network has said the maintenance multiplier will do this by adjusting the allocation of TSEs so that access holders affected by maintenance and construction outages over particular periods in a month will end up receiving their contracted monthly TSE (Aurizon Network, sub. no. 1: 14).

However, stakeholders have questioned whether the maintenance multiplier will work in practice. The Authority considers that the draft system rules should address this by including all relevant information that access holders would need to be confident the maintenance multiplier is workable. In this context, Femol noted that:

[w]hat is not apparent is how or when the maintenance multiplier is to be applied and what process is to be followed if there is insufficient track capacity to provide for all contracted TSEs for each month. Particularly given that TSEs do not carry over to the following month. An example of how the weekly TSEs are calculated [...] may be useful to better explain the process (Femol: 10).

To manage this, Femol recommended that Aurizon Network:

... provide information on how the weekly TSEs are applied to ensure that Access Holders receive their contracted TSEs. One way to achieve this is by documenting clearly:

- *how the nominated weekly TSE is determined from the annual TSE*
- *how the maintenance multiplier will be applied to this figure (or a variant of the figure) to obtain the adjusted nominal weekly TSE*
- *how the available network capacity will be managed to deliver the adjusted nominal weekly TSE by providing access holders with train orders higher in number than the nominal daily TSE figure on days without maintenance*
- *how [Aurizon] Network will manage TSEs that are unable to be allocated due to capacity constraints (Femol: 11).*

The Authority accepts that the draft system rules are unclear on how adjusted weekly TSEs can *operationally* be managed. This means that Aurizon Network has not sufficiently communicated whether it has adequately provided for compensation if the rights of users of the service are adversely affected. This is required under the approval criteria in the QCA Act, which include ‘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 have been adversely affected’ (s.138(2)(e)).

The Authority therefore requires that Aurizon Network’s draft system rules be explicit in explaining how the maintenance multiplier will ensure access holders actually obtain their contracted level of TSEs.

The Authority does not accept Asciano’s concern that the average of 28.8 maintenance-free days per month in Aurizon Network’s 2012 maintenance calendar is incompatible with monthly paths for TSEs being based on 30-day months. This is because the maintenance-multiplier approached proposed by Aurizon Network is intended to mitigate this issue by increasing the number of train paths an access holder is able to use on days without maintenance activities to compensate for the lower number of paths received on days with maintenance.

Draft Decision 2.4 - Maintenance Multiplier - Transparency

The Authority requires the draft system rules be amended so the description of the maintenance-multiplier clearly indicates how:

- (a) the maintenance multiplier will be applied to nominal weekly train service entitlement (i.e. TSE) figure to obtain the adjusted nominal weekly TSE;**
 - (b) network capacity will be managed to deliver the adjusted nominal weekly TSE by providing access holders with train orders higher in number than the nominal daily TSE figure on days without maintenance; and**
 - (c) Aurizon Network will provide access holders with paths, in accordance with the Contested Train Path Decision-making process in the network management principles, to make up for the portions of their monthly TSEs (which have already been adjusted to account for planned maintenance activities in that month) it is unable to deliver due to an Aurizon Network Cause (as defined in the undertaking).**
-

Flexibility

The maintenance multiplier is intended to give some comfort to access holders that they will receive their contracted TSEs. However, Asciano and BMA have criticised the assumptions underlying the calculation of the maintenance multiplier (Asciano, sub. no. 2: 8; BMA, sub. no. 4: 5).

Asciano considered the way in which the maintenance multiplier is calculated does not sufficiently account for factors impeding an access holder's ability to meet the adjusted TSE for a particular week, including:

- (a) the availability of crew and rollingstock for the day in which an upward adjustment to a nominal TSE has been applied; and
- (b) the unloading capability of the port (which is beyond the control of the access holder).

The Authority considers that the calculation of the maintenance multiplier should be sufficiently flexible to accommodate these factors. Therefore, the draft system rules should explain how these factors are addressed in the derivation procedures for the maintenance multiplier. The draft system rules should also ensure the process is equitable across all access holders.

The Authority is also concerned about the flexibility Aurizon Network has afforded itself in relation to the four-week critical asset constraint summary used to inform development of the scheduling constraint summary. Aurizon Network has indicated that 21 days of the four-week critical asset constraint summary will be locked down, but has also said it can alter this during the lock-down period. Aurizon Network has not indicated whether access holders will be informed why alterations in the lock-down period have occurred.

In particular, there does not appear to be a process in place to prevent Aurizon Network from unreasonably altering maintenance activities in the lock-down period, which may adversely affect access holders. The Authority does not consider the risks that access holders have to bear in light of such uncertainty are reasonable. The Authority considers that Aurizon Network should not have the scope to change maintenance and construction activities planned for the lock-down period if that can adversely affect access holders' train services, unless the changes in maintenance activities are allowed for in the network management principles (schedule G, Part A, 4.(d)(iv)).

Draft Decision 2.5 - Maintenance Multiplier - Flexibility

The Authority requires the draft system rules be amended so the description of the process for calculating and applying the maintenance multiplier indicates:

- (a) how constraints that affect access holders' abilities to manage the maintenance-multiplier approach will be accounted for in calculating the maintenance multiplier; and**
 - (b) that Aurizon Network will not have the scope to change activities included in the 21-day maintenance lock-down period unless any proposed changes are allowed for under schedule G, Part A, 4.(d)(iv) in the network management principles.**
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3. TRAIN SCHEDULING

The undertaking sets out scheduling principles that Aurizon Network must follow to fulfil its role as the network manager. The system rules must have regard to these principles, with the main objective being to specify in greater detail how Aurizon Network will plan, schedule and control the operation of train services.

Aurizon Network has indicated it will schedule train paths using a weekly train plan (WTP). Once the WTP is in effect, the plan is transferred to the Daily Train Plan (DTP) stage where access holders have less flexibility to amend their train orders.

The Authority's considers that any WTP and DTP processes proposed by Aurizon Network in the system rules should be transparent, equitable, and consistent with the network management principles. It should also provide end users with the flexibility to nominate a different above-rail operator, at short notice, to operate a scheduled train service. Further, as the consumption of TSEs is linked to the WTP and DTP processes, the process for determining TSEs should be transparent and equitable.

The Authority has made recommendations to facilitate this, namely to require:

- (a) greater information provision on, and more equitable management of, the WTP (particularly outcomes arising from the Contested Train Path Decision-making Process) and DTP processes; and*
- (b) a more transparent process for the calculation and consumption of TSEs.*

3.1 Introduction

An access holder only receives value from its TSE when a train has been scheduled and has completed its trip from origin to destination. It is therefore important that the scheduling process be transparent and equitable, so that it provides confidence to access holders that their train orders will be processed fairly.

A scheduling process starts with a long-term template, showing timetabled services, track closures for maintenance, and available paths⁹, which is then translated into a weekly plan, and finalised in the daily train plan. This daily plan is then further amended on the day of running, as train controllers manage the issues that arise from delays and other changes that occur during the operation of the train services.

The way in which the trains have been scheduled, re-scheduled, and then redirected on the day of operation affects the degree to which an access holder is deemed to have consumed its TSEs. The consumption of TSEs affects an access holder's 'take-or-pay' obligations, i.e., the access charges that access holders have to pay even if they choose not to run their train services. In assessing the proposed treatment of scheduling, the Authority has had regard to the effect of excluding existing assets for pricing purposes, and the pricing principles in s.168A of the QCA Act, which are approval criteria in the QCA Act (paragraphs 138(2)(f) and (g)), but, as the system rules do not deal with pricing matters, it has not focussed on them.

The way in which scheduling is addressed in the draft Capricornia system rules is considered in Chapter 3 with reference to:

- (a) scheduling and the network management principles (section 3.2);

⁹ This long-term plan is typically the MTP (see section 2.2), although Aurizon Network, other stakeholders and experts differ on what form the MTP should take.

- (b) the daily train plan and day-of-operation issues (section 3.3); and
- (c) how TSEs are calculated and consumed (section 3.4).

3.2 Scheduling and Network Management Principles

Background

The network management principles in the undertaking set out scheduling rules that Aurizon Network must follow when managing train orders that access holders have submitted. The principles also specify how Aurizon Network will allocate a train path if there is insufficient capacity in the system to accommodate all train orders (i.e. the Contested Train Path Decision-making Process).

Among other things, the network management principles state that the MTP must be in a form that is readily convertible to a DTP, which is the primary reference document train controllers use in conducting their duties. This allows Aurizon Network to use the template of the MTP, and transfer it to the intermediate train plan (which can be a weekly train plan), taking into account scheduling constraints and access holders' requests for paths.

This section assesses if the process proposed by Aurizon Network for developing and amending the schedule is transparent and equitable, and consistent with the network management principles. The Authority's analysis is centred on two key areas:

- (a) timeframes for preparing the schedule; and
- (b) the path allocation process.

Timeframes

Aurizon Network's proposal

Aurizon Network proposed to comply with the network management principles by including a medium-term process in its draft system rules for organising train orders in the lead up to the week of operation. In particular, Aurizon Network proposed a process for finalising train orders before it develops a WTP.

Aurizon Network said it would start organising the train schedule six days before finalising the WTP, and 10 days before the first train operates on a Monday to Sunday schedule. The process is as follows (see also Figure 3.1):

- (a) (Fri) 10 days before week of operation: supply chain stakeholders to advise Aurizon Network if there are variations in mine and port maintenance activities for the week of operation so that the scheduling constraint summary can be prepared (2.00 pm);
- (b) (Mon) seven days before week of operation: Aurizon Network to send the scheduling constraint summary to access holders (2.00 pm);
- (c) (Tue) six days before week of operation:
 - (i) access holders to propose contracted train orders after receiving the scheduling constraint summary (2.30 pm);
 - (ii) Aurizon Network and Gladstone Ports Corporation (GPC) to liaise with access holders about train orders proposed (3.00-4.00 pm);

- (iii) access holders to finalise submission of contracted train orders and any ad hoc requests (4.00 pm); and
 - (iv) access holders can propose any additional train orders after 4.00 pm, but Aurizon Network will schedule these on a best-endeavours basis only.
- (d) (Thu) four days before week of operation:
- (i) Aurizon Network to send draft WTP to access holders and GPC (9.00 am);
 - (ii) access holders and GPC to propose any variations to WTP in accordance with the plan alteration rules set out in draft system rules (10.00 am);
 - (iii) Aurizon Network to finalise changes to WTP (11.00 am);
 - (iv) Aurizon Network to distribute final WTP to access holders (2.00 pm);
 - (v) access holders to confirm acknowledgement of WTP (4.00 pm); and
 - (vi) Aurizon Network transfers WTP to daily-train-plan environment (Aurizon Network, sub. no. 1: 14-18).

The draft system rules said that if the access holder does not reconfirm its train orders in the WTP by 4.00 pm on Thursday (before the WTP commences on the coming Sunday as in (d)(v) above), Aurizon Network would assume the access holder had rejected the WTP and would not process that access holder’s train orders (Aurizon Network, sub. no. 1: 18).

Figure 3.1: WTP planning process

Day	Fri (10)	Sat (9)	Sun (8)	Mon(7)	Tue (6)	Wed (5)	Thu (4)	Fri (3)	Sat (2)	Sun (1)	Mon (*)
Time											
9:00							Draft WTP distributed				
10:00							Access holders and GPC propose variations to WTP				
11:00							Aurizon Network finalises WTP				
12:00											
13:00											
14:00	Mines and ports indicate maintenance variations to Aurizon Network for Week of Operation beginning Mon (*)			Scheduling Constraint Summary distributed by Aurizon Network to indicate pathing availability for Week of Operation			Final WTP distributed				Day 1 of Week of Operation
14:30					Access holders propose TSE train orders to Aurizon Network						
15:00					Aurizon Network, access holders and GPC discuss proposals						
16:00					Access holders submit TSE and Ad Hoc train orders to Aurizon Network						
							Access holders to convey acceptance of WTP to Aurizon Network				

Source: Aurizon Network, QCA

* Numbers in brackets are days before first day of operation.

Stakeholders’ comments

Asciano said it was not reasonable for Aurizon Network to assume that access holders rejected the WTP if access holders had not provided written acknowledgement by the stipulated time. Asciano argued that these train orders should be processed, as per the WTP, since access holders were contractually entitled to receive them (Asciano, sub. no. 3: 11).

Authority's analysis

Given TSEs are the core product provided by Aurizon Network, any measure that prevents an access holder from receiving its TSEs needs to be considered carefully.

Acceptance of orders

The Authority does not accept that Aurizon Network can reject an access holder's orders if the access holder does not reconfirm its train orders in the WTP by 4.00 pm on Thursday (four days before the next week's schedule begins). Rather, the Authority accepts Femol's advice that:

... Access Holders may not be in a position to reply within the nominated timeframes [for acknowledgement of the WTP] and could rightly expect that having already worked through the ordering process that their orders will be processed accordingly. Cancelling orders because they have not responded in the nominated timeframes as indicated will only lead to conflict between the parties (Femol: 14).

The Authority accepts Femol's position that Aurizon Network:

... alter the process to indicate that if no response is received by the nominated time then orders will be deemed as accepted and will be processed as planned and will be counted towards the access holder's contracted TSE as normal (Femol: 14)

Separately, the Authority considers that the timelines proposed by Aurizon Network for access holders to finalise train orders are likely to be too short, and may adversely affect those not positioned to respond as quickly as required. Stakeholders did not make specific comments on this issue, apart from Asciano's concern about the deadline. However, Femol noted that:

[c]larification is needed around the process for determining additional orders or variations to existing orders after the Weekly Orders have been finalised (Femol: 12).

Scheduling and consistency with alternative SAAs

The proposed alternative SAAs (as provided for in clause 5.2(n) of the undertaking) seek to provide end users with flexibility in the choice of above-rail operator. And that flexibility will only be afforded if the network management principles – and, in particular, the approved system rules – provide it.

The Authority is mindful that stakeholders made submissions on the draft Capricornia system rules *before* the Authority released its draft decision on Aurizon Network's proposed alternative SAAs. There may be instances where the draft system rules could conflict with the proposed alternative SAAs.

The Authority requires that any process for scheduling trains in the WTP and DTP account for the Authority's draft decision on proposed alternative SAAs, which provides for end users to switch between its appointed above-rail operators at short notice.

In this regard, Femol said that:

[t]he Capricornia draft system rules also need to be modified to reflect the definition of Access Holder as described in the new draft proposed alternative Standard Access Agreements (SAAs) where Access Rights may be held via an End User Access Agreement (EUAA) and contracted out to a suitable haulage operator via a Train Operator Agreement. In doing so, the system rules should afford end users the flexibility to manage their access rights, including the right to switch between train operators outside the DTP period (specifically, 48 hours' notice to [Aurizon] Network) without TSE consumption being recorded (Femol: 17).

An example of inconsistency is that Aurizon Network has proposed in its draft system rules that any additional orders or amendments to existing train orders that are received after 4.00 pm, Tuesday (i.e. six days before the week of operation) will be accommodated on a best-endeavours basis.

However, it is unclear how this process will operate under the Authority's draft decision on alternative SAAs which proposes that end users would be able to reallocate their access rights between their above-rail operators with a minimum of 2 business days' notice to Aurizon Network.

Femol said:

[o]ne way of doing this could be to restrict processing any changes to the Weekly Train Plan (WTP) until the day before implementation i.e. the development of the Daily Train Plan (DTP). At this time it will be clear if additional train paths are available or in the case of variations what impact if any they will have on other Access Holders. If there are more requests for additional services than there are paths available then [Aurizon] Network should apply the requirements of the Contested Train Path Guidelines within Schedule G of the Undertaking. Variations should only be approved if they do not conflict with another user's allocated TSE. (Femol: 12)

The Authority considers that providing users with increased flexibility to vary their requested train services can enhance the efficiency of operations in the supply chain. This is because such flexibility permits above-rail and port operators to manage end-user requirements more effectively. It will also enable end users to better manage their underlying access rights, regardless if this is done via the current or alternative access agreements.

Notwithstanding this, the Authority accepts that any increase in flexibility must have regard to the network's operational constraints and Aurizon Network's ability to accommodate these.

In this context, the Authority requires Aurizon Network to include measures in the system rules which are consistent with the Authority's position on the alternative SAAs, which allows end users to switch between appointed operators at short notice, for train services already scheduled in the WTP¹⁰, without any additional TSE consumption being recorded.

There are several conditions that need to be met for Aurizon Network to accommodate such a switch.

In particular, end users must notify Aurizon Network about their intention to switch operators, at least two business days before the operation of the relevant train service. Aurizon Network must agree to this request provided that no other access holder's scheduled train services are adversely affected, or a planned possession is not met. In doing so, Aurizon Network must use reasonable endeavours to consult with, and seek the agreement of, other infrastructure service providers who may be affected by the end user's request. The Authority considers the WTP process in the draft Capricornia system rules must be able to accommodate these rights end users have under the alternative SAAs.

Separately, the Authority requires Aurizon Network to clarify what constitutes a 'best-endeavours basis' in the system rules for accommodating variations to requested train services in the context of the weekly train plan.

¹⁰ This is provided for under clause 2.3 of the End User Access Agreement of the alternative SAAs. This clause also provides for the system rules to specify alternative notification periods (instead of two business days) for end users to advise Aurizon Network they intend to switch between their appointed operators for train services already scheduled in the intermediate train plan (or WTP, in the case of the draft Capricornia system rules).

Weekly schedule

The Authority has assessed the weekly scheduling process as proposed by Aurizon Network in its draft Capricornia system rules. While stakeholders have not raised concerns about the planning process being anchored on a weekly train plan, the Authority understands that other approaches, including rolling 10-day scheduling, have been considered as ways to address operational variability in the Northern Bowen Basin (i.e. Goonyella and Newlands systems).

Such a different approach may become more appropriate for Capricornia in the future when new projects such as the Wiggins Island Coal Export Terminal and the Surat Basin Railway make the network more complex. Even with the existing system configuration, there is potential for significant variation in the four days between Thursday (when the WTP is published) and the Monday starting the week of operation.

Similar issues arise with DTPs produced for Saturday to Monday, which must be finalised by 2.00 pm of the preceding Friday, increasing the potential for variations on the day of operation.

The Authority invites stakeholders' further comments on the weekly planning cycle, and how (or if) Aurizon Network's draft system rules could provide greater scheduling flexibility, subject to network operational constraints.

Draft Decision 3.1

The Authority requires the draft system rules to be amended such that:

- (a) **access holders not providing written acknowledgement of receiving the weekly train plan (i.e. WTP) to Aurizon Network does not translate to the access holder's train orders being rejected; rather, it means the orders will be processed as the WTP indicates;**
 - (b) **end users (via the End User Access Agreements in the alternative SAAs) can re-appoint above-rail operators to undertake the relevant train order scheduled in the WTP, provided they give Aurizon Network at least two business days' notice. Aurizon Network must accept this request when the relevant conditions in the End User Access Agreement are satisfied; and**
 - (c) **they clarify the meaning of a 'best-endefforts basis' when accommodating variations to requested train services in the WTP.**
-

Path allocation process

The undertaking includes rules (i.e. the Contested Train Path Decision-making Process of the network management principles, schedule G, appendix 2) to guide the allocation of paths when capacity is scarce and, in particular, to ensure that Aurizon Network does not discriminate in favour of its related party above-rail operator when scheduling trains.

In this context, the Authority has considered the controls and transparency that are necessary to ensure access holders are treated equitably.

The analysis for this section has been divided into the following matters:

- (a) priorities of trains under the Contested-Train Path Decision-making Process;
- (b) application of the Contested-Train Path Decision-making Process;
- (c) transparency of the Contested-Train Path Decision-making Process;

- (d) weekly train order template; and
- (e) power stations.

Priorities of trains under the Contested Train Path Decision-making Process

Aurizon Network said that, in scheduling trains, it will prioritise train orders as follows:

- (a) agreed planned maintenance and construction;
- (b) contracted timetabled passenger, livestock and freight services;
- (c) contracted domestic cyclic train services unloading at a power station;
- (d) contracted cyclic train services;
- (e) additional requested contracted cyclic train services above the weekly allocation;
- (f) *ad hoc* passenger, freight, livestock and coal services with existing contracts; and
- (g) *ad hoc* cyclic services with no existing contracts.

Coal-carrying train services destined for export terminals fall into categories (d) to (g), hence are scheduled after planned maintenance and construction; timetabled services; and domestic cyclic services destined for power stations (Aurizon Network, sub. no. 1: 13).

Asciano said *ad hoc* trains should not get priority over contracted TSE trains when they arrived at the port:

For example, an access holder receives a path for a TSE service to depart origin one path earlier than another access holder who has requested an ad-hoc service. Both trains arrive back at port at around the same time but the access holder with the ad-hoc service is scheduled to unload first and the access holder with the TSE service has to queue at the port. To the extent that the port and shipping needs are the same for both access holders, the access holder with the TSE should have the priority. (Asciano, sub. no. 3: 10)

Asciano explained that a single train cycle was made up of two separate TSEs; one for the depot-to-mine segment and another for the mine-to-port segment. Asciano said that, in practice, Aurizon Network appeared to apply the Contested Train Path Decision-making Process for the depot-to-mine segment but not the mine-to-port segment.

This would mean that, in forming the WTP, a TSE train would get priority over an *ad hoc* train in getting from the depot to the mine, but may lose out to the *ad hoc* train on the journey from the mine back to the port. Asciano said that this was not commercially fair as a TSE train should be prioritised ahead of *ad hoc* trains for the entire duration of the relevant train cycle.

The Authority accepts Asciano's concern that a contracted TSE train should be scheduled over an *ad hoc* train for the whole train cycle, not just for the 'depart origin' part of the train cycle, when preparing the WTP. However, it is noted that the draft system rules do not appear to conflict with Asciano's position. The draft system rules have indicated that contracted TSE orders are scheduled ahead of *ad hoc* orders when the WTP is being prepared; the process does not treat TSEs for a depot-to-mine segment differently from a mine-to-port segment.

Indeed, Aurizon Network has clarified to the Authority that contracted TSE orders rank higher than *ad hoc* orders when the WTP is being developed. However, Aurizon Network

noted that in the day of operation, there is no distinction between any scheduled train orders – i.e. a scheduled TSE order is treated equally to a scheduled *ad hoc* order. The Authority accepts Aurizon Network’s clarification, and does not require any amendments to the draft system rules in this regard.

Application of the Contested-Train Path Decision-making Process

Aurizon Network proposed that if there were not enough system paths to fulfil all train orders, it would use the Contested Train Path Decision-making Process in the network management principles to allocate the available paths. In doing so, Aurizon Network said it would confirm that rollingstock and port slots were available so the train path could be assigned appropriately (Aurizon Network, sub. no. 1: 16).

Asciano said port and shipping needs may in some cases legitimately outweigh the strict application of the Contested Train Path Decision-making Process described in the system rules. In this context, Asciano said path prioritisation:

... should be more flexible and place the issue of port operations at the same level as the priority considerations relating to whether [Aurizon] Network and/or the access holder are behind in providing or receiving contracted train services (Asciano, sub. no. 3: 10).

The Authority considers that the draft system rules already address Asciano’s concerns. This is because the system rules provide that Aurizon Network would check if port slots were available when using the Contested Train Path Decision-making Process to allocate contested train paths (Aurizon Network, sub. no. 1: 16). In addition, Femol noted that Asciano’s concern was addressed in practice. Femol said:

[Aurizon] Network and the GPC work together to develop the train dumping program before [Aurizon] Network schedules the trains through the dumpers. (Femol: 12)

Notwithstanding this, the Authority considers it would benefit the transparent and efficient operation of the supply chain if the rules for the interaction between GPC and Aurizon Network were more clearly set out in the draft system rules.

Asciano also had a particular concern with Aurizon Network’s proposed discretion to choose how to assign a contested path in the event the path could not be allocated. It was concerned that Aurizon Network could allocate these paths unilaterally, taking into consideration the best solution for the supply chain as a whole. Asciano said:

... a better outcome could be achieved if [Aurizon] Network did not act unilaterally, but instead at a minimum consulted with producers, above rail operators and port operators (Asciano, sub. no. 3: 10).

The Authority does not object to Aurizon Network deciding how best to allocate a contested train path in the event the steps in the Contested Train Path Decision-making Process failed to allocate the path. This is because Aurizon Network is entitled to do so as it is provided for in the network management principles (schedule G, appendix 2, (d)).

Notwithstanding this, Aurizon Network has not adhered to the Contested Train Path Decision-making Process in its draft system rules. This process in the network management principles requires Aurizon Network to undertake a number of steps before it can unilaterally decide which access holder gets the contested path, namely that:

- (a) Aurizon Network must first eliminate access holders which are contesting a path that is outside the scope of their TSE;

- (b) where step (a) results in all access holders being eliminated or two or more being retained, then these access holders can discuss and agree among themselves who gets the path; and
- (c) failing this, Aurizon Network, subject to any train-service and unloading-facility priorities spelt out in the system rules, will allocate the path based on which access holder is most behind in TSEs. There is a sequence of criteria used to identify which access holder is most behind.

Aurizon Network's draft system rules have omitted one of the criteria in (c) above. The missing step is that the contested path is to be allocated to the access holder that is the most behind, in percentage terms (ratio of aggregated train services to aggregated contracted train services), in receiving its contracted train services on a contract-year-to-date basis (schedule G, appendix 2, cl.(c)(iv)). The Authority understands that this error is inadvertent and will be corrected by Aurizon Network in revising its draft system rules.

Transparency of Contested-Train Path Decision-making Process

Aurizon Network proposed that it would keep written records of all decisions made in relation to allocating TSE train orders. It also proposed to make this information available to access holders requesting this information for dispute-resolution purposes, in accordance with the dispute provisions in the undertaking (Aurizon Network, sub. no. 1: 16-17).

Asciano said the draft system rules needed to require that Aurizon Network be more transparent on path allocations which followed from Aurizon Network's use of the Contested Train Path Decision-making Process. Asciano specifically noted:

[i]n developing and finalising the weekly train plan and distributing the plan to the train operators, [Aurizon] Network should also provide in writing the reason for not supplying any train services requested by the train operators including:

- (i) details of any "won" and "lost" contested paths;*
- (ii) reasons for any schedule times longer than access agreement sectional run times; and*
- (iii) reasons for any alternative path provided (Asciano, sub. no. 3: 11).*

While the draft system rules have stated Aurizon Network will provide information to access holders wishing to formally dispute contested-train-path outcomes, they have not said that this information will be readily available for information or clarification purposes. The Authority considers that this information should be made available more freely, and that commencing a formal dispute should not be a condition for the release of this information.

The Authority considers that the lack of transparency in Aurizon Network's proposal is a relevant factor to have regard to under the approval criteria of the QCA Act, which include 'any other issues the Authority considers relevant' (s.138(2)(h)).

The Authority therefore considers it reasonable that Aurizon Network should be transparent about why an access holder has lost a contested train path, or has been offered an alternative path from the one scheduled in the WTP.

Such a process would provide confidence to access holders that their orders are being treated fairly (in accordance with the Contested Train Path Decision-making Process) by Aurizon Network, and that alternative paths are not being offered because a related above-rail operator is being favoured.

The Authority accepts Asciano's view that Aurizon Network should provide access holders with reasons why scheduled section run times diverge from those in access agreements. This

would go some way to addressing concerns among access holders that Aurizon Network is being partial to its related above-rail operator by offering more favourable train paths to it. Information relating to divergences in section run times could be provided in the WTP distributed to access holders.

In this regard, the Authority considers Aurizon Network should provide an explanation if the scheduled section run times were longer than those in the access agreements, including any below-rail transit time allowances. However, the Authority considers there should be a materiality threshold for when this requirement is triggered. Without such a threshold, Aurizon Network might have to provide feedback on minor divergences.

Weekly train order template

Aurizon Network proposed to divide orders for coal-carrying train services into three categories. In order of priority, they are:

- (a) contracted TSE orders – i.e. all orders received within the adjusted¹¹ nominal weekly TSE of the access holder;
- (b) additional TSE orders (which are orders contracted above the adjusted nominal weekly TSE level); and
- (c) *ad hoc* orders – i.e. passenger, freight, livestock or coal train services for which contracts exist but MTP requirements are not fulfilled; and cyclic coal train services for which no contractual TSE exists (Aurizon Network, sub. no. 1: 15).

In doing so, Aurizon Network proposed that access holders should use the weekly train order template set out in the draft system rules when submitting train orders (Aurizon Network, sub. no. 1: 15).

Asciano said the draft system rules' template for weekly train orders should require Aurizon Network to complete TSE orders and distribute them to access holders, and to indicate whether the order was a TSE train, a non-TSE train or an *ad hoc* train (Asciano, sub. no. 3: 9).

The Authority accepts Asciano's concern. This is because train orders that are outside the standard process for allocating TSEs can be treated quite differently in the planning process. In particular, a contracted order, which is consistent with a TSE, but in addition to an access holder's pro rata allocation of paths in a week, will be accepted over an *ad hoc* order. Further, the Authority considers that providing such information would be useful for access holders to be aware of their TSE consumption (see section 3.4). On this, Femol noted that:

[i]t appears that there may be some doubt around how [Aurizon] Network classifies TSE orders so to avoid any confusion [Aurizon] Network should nominate how they have classified each order for the purpose of consumption e.g. contracted TSE, non-contracted TSE or ad hoc. (Femol: 12)

The Authority therefore requires Aurizon Network to indicate whether an access holder's train orders are considered to be contracted, additional contracted, or *ad hoc* when the WTP is distributed.

¹¹ The number of nominal weekly TSEs is scaled up to the adjusted nominal weekly TSEs via the maintenance multiplier to account for train paths lost due to Aurizon Network's maintenance and construction works (see section 2.3).

Power stations

Aurizon Network proposed that domestic cyclic services destined for power stations receive priority over coal-export cyclic services (Aurizon Network, sub. no. 1: 15).

In a meeting with the Authority's consultant Femol, stakeholders argued that cyclic services destined for a power station should not get priority over export-coal cyclic services unless there was a statutory requirement for this to exist.

The Authority considers that contracted cyclic services destined for a power station should not receive priority over contracted cyclic services destined for the port terminals if there is no statutory or undertaking requirement for this. Aurizon Network has subsequently indicated that its rationale for having such a priority has been driven by security-of-energy-supply concerns.

While such a concern may be well intentioned, such a priority is commercially valuable and it should not be provided in an unstructured way. Any class of customers could seek to be granted some form of a priority status if it gave them a commercial advantage over a rival, in particular if everyone paid the same price for access. Moreover, the Authority notes that Queensland is part of the National Electricity Market (governed by the National Electricity Laws) which means that the State's energy security has been, to a large extent, protected by the integration of the State's electricity network with generation assets in other states along the eastern seaboard.

Draft Decision 3.2

The Authority requires the draft system rules to be amended such that:

- (a) **the use of the Contested Train Path Decision-making Process is consistent with the relevant description in the network management principles of the undertaking;**
 - (b) **they clearly set out the process for the interaction between GPC and Aurizon Network for scheduling trains through the port unloading slots;**
 - (c) **Aurizon Network must supply reasons (within confidentiality requirements) for outcomes arising from the Contested Train Path Decision-making Process and the scheduling process more generally;**
 - (d) **the process for assessing whether an operator's scheduled below-rail transit time (including time for above-rail dwells and storage) exceeds the time specified in the undertaking and relevant access agreements (i.e. the section run times plus below-rail transit time allowances), is clearly documented and significant decisions recorded;**
 - (e) **the WTP indicates whether an access holder's train orders are considered by Aurizon Network to be contracted TSE, additional contracted TSE or *ad hoc* services; and**
 - (f) **cyclic train services destined for export terminals obtain the same scheduling priority as domestic cyclic services destined for power stations, as specified in the network management principles.**
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3.3 DTP and Day-of-Operation Issues

Background

The daily train plan (DTP) shows the schedule of trains to be run on the day of operation. It is therefore important that the process for amending the DTP be transparent, so that relevant

supply chain stakeholders can be confident that Aurizon Network will efficiently and equitably manage changes to the DTP.

The network management principles describe obligations that need to be met by Aurizon Network in producing and amending the DTP.

The DTP must indicate all scheduled train services and planned possessions, for the day in question, in the form of a time-and-motion graph (schedule G, part A, 4.(a)). Aurizon Network must schedule the DTP at least one business day before the actual day of running, and provide all relevant access holders and infrastructure service providers with a copy of the DTP within the same timeframe (schedule G, part A, 4.(c)).

The network management principles also describe day-of-operation principles for Aurizon Network to follow when dealing with diversions and cancellations arising in the course of that day. The network management principles set out a *Traffic-Management Decision Making Matrix* that Aurizon Network must use to mitigate such day-of-operation issues; they also outline exceptions that enable Aurizon Network to favour late trains over punctual trains. For example, Aurizon Network can provide priority to a late train instead of a punctual train if doing so is consistent with the coal-supply objectives of the system rules (schedule G, appendix 3, rule 8).

The Authority has reviewed Aurizon Network's proposed preparation of the DTP and day-of-operation issues to assess whether Aurizon Network's approach is:

- (a) sufficiently transparent in demonstrating how diversions and cancellations (planned and emergency-related) will be treated;
- (b) equitable across access holders and their access agreements in accordance with the network management principles; and
- (c) effectively designed to improve the efficiency of the supply chain.

DTP

Aurizon Network's proposal

When the WTP is finalised on the Thursday before the week of operation starting Monday, it is transferred to the DTP process.

Aurizon Network proposed that its DTP indicate:

- (a) departure and arrival times for planned services at depots, loading and unloading facilities;
- (b) port unloading schedules;
- (c) scheduled maintenance activities; and
- (d) planned dwells for scheduled services on the network (Aurizon Network, sub. no. 1: 20).

Aurizon Network proposed that the DTP will be finalised at 2.00 pm on the business day prior to the day of operation, and transferred to Aurizon Network's Production Control Centres in the form of *train control diagrams*. Train control diagrams are graphical representations of train movements reflecting the DTP's schedule.

The DTP will be distributed electronically to access holders and GPC (the RG Tanna terminal operator) at the close of that business day. The DTP that access holders will receive would only contain their own planned services and maintenance activities that affect their operations.

Aurizon Network proposed to accommodate a DTP change request (received at least 2 business days before the day of operation) if the request does not:

- (a) affect another access holder's performance; or
- (b) conflict with any scheduled construction- or maintenance-related activities; or
- (c) compromise Aurizon Network's ability to provide monthly TSEs contracted for in the access agreements (Aurizon Network, sub no. 1: 21).

Aurizon Network considered that its proposal was consistent with the requirements of the network management principles (schedule G, clause 4(d)).

Aurizon Network proposed to offer any available alternative paths to access holders in accordance with the network management principles, when network emergencies have affected access holders' scheduled train services.

Stakeholders' comments

Asciano criticised some elements of the DTP planning process proposed by Aurizon Network. Asciano said the DTP should be distributed to stakeholders at the same time that train control diagrams were printed for Aurizon Network's planners. It said this could be readily done because the DTP and the train control diagrams produced were very similar in nature, if not identical (Asciano, sub. no. 3: 11).

Asciano also said the DTP needed to provide details of scheduled sectional running times, including crossing and passing times, so that above-rail operators would be in a better position to plan for the day's activities (Asciano, sub. no. 3: 11).

Authority's analysis

The Authority considers that the DTP process proposed by Aurizon Network is broadly consistent with the undertaking and suitable for access holders. However, some amendments are necessary, mostly to make the process more transparent.

The Authority considers that Aurizon Network should release the DTP to all access holders at the earlier of the time at which the train control diagrams are printed for Aurizon Network's planners or at the close of the business day in which the diagrams were printed. Doing this would address any suspicion that supply chain stakeholders may have about Aurizon Network's related above-rail operator receiving the DTP before other access holders.

The Authority accepts Asciano's position that Aurizon Network's DTP should contain additional information on scheduled sectional running times, including crossing and passing times, which Aurizon Network has not proposed to include.

As a general rule, information cannot be considered confidential if it is generally available. This applies to much of the rail scheduling and operational information, including sectional running times, crossing and passing times, which can readily be observed (as Asciano demonstrated in its submission on the electric traction draft amending access undertaking – Asciano, April 2012: 20). The Authority therefore considers it is reasonable for such

information to be published, as such transparency will help improve the efficiency of the supply chain. This will also promote equitable operation of the rail infrastructure by showing that Aurizon Network is treating all parties equally.

Draft Decision 3.3

The Authority requires the draft system rules to be amended such that:

- (a) the DTP will be released to all access holders at the earlier of the time at which the train control diagrams are printed for Aurizon Network's planners or at the close of the business day in which the diagrams are printed; and
 - (b) scheduled sectional running times for the access holder, including all scheduled dwells (i.e. crossing and passing times of the relevant train services), be published with the DTP.
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Day of Operation

Aurizon Network's proposal

Aurizon Network's draft system rules outlined how Aurizon Network will manage planned and unplanned changes to train services in the day of operation (Aurizon Network, sub. no. 1: 21).

Aurizon Network indicated that network-control issues surfacing in the day of operation will be managed in line with the Traffic Management Decision Making Matrix in the network management principles (Aurizon Network, sub. no. 1: 22).

Aurizon Network's draft system rules also set out communication protocols that access holders (or their above-rail operators) must follow when preparing to depart their scheduled origins. If an access holder requests a change in destination – whether it be a port or mine – on the day of operation, Aurizon Network will process the request and deem it as a cancellation of the original origin-destination TSE and a separate request for the new origin-destination pair.¹² The access holder will be billed for the cancellation of the original path and for the creation of the diverted path.

During the course of a day, above-rail operators can stop their trains for short periods of time on designated parts of the network to coordinate crew changes and meal breaks; such stops are referred to as dwells. Where dwell times are longer than permitted under the relevant access agreement, Aurizon Network proposed that these occurrences would be treated as *storage* on the network. In this regard, Aurizon Network indicated access holders must negotiate with Aurizon Network 24 hours in advance if they wish to store trains on the network (Aurizon Network, sub. no. 1: 22).

Stakeholders' comments

Asciano and Rio Tinto said a requested diversion from a destination on the day of operation that did not change the capacity of the network should not be counted as a cancellation of the original origin-destination TSE and a request for a new path for the diverted-to origin-destination pair. This was because other access holders' train services would not be affected if the diversion did not affect system capacity (Asciano, sub. no. 3: 12; Rio Tinto, sub. no. 5: 2).

¹² This consideration will become particularly relevant once Wiggins Island Coal Export Terminal is operating alongside RG Tanna.

Asciano further argued that if the vacated path was consumed by another train service, then consumption should not be recorded against the access holder requesting the diversion (Asciano, sub. no. 3: 12).

Authority's analysis

The scheduling rules, particularly on the day of operation, need to balance:

- (a) the *flexibility* that will improve the efficiency of the supply chain, with
- (b) the *opportunity costs and administrative costs* that changes on the day of running may impose on other users and Aurizon Network.

Asciano and Rio Tinto have argued that, where an access holder's request in the day of operation to amend the origin or destination of a TSE does not result in additional capacity being consumed, additional TSE consumption should not be recorded against the access holder. The Authority considers that, in principle, such a change would not be unreasonable.

However, on balance, such last-minute changes would require Aurizon Network to check if capacity is unchanged by the access holder's request during the day of operation. In doing this, Aurizon Network would incur additional communication and due-diligence costs that it may not be recoverable from the access holder.

The Authority notes that, for example, an operator requesting to commence its journey at a different mine site along a non-heavily-used branch line is unlikely to affect system capacity. Similarly, an operator's request to change its destination from a port to one adjacent to it is also unlikely to affect system capacity. Such requests, which can be very readily accommodated, could be classified as part of an array of pre-determined 'switches' that Aurizon Network may be willing to approve immediately.

One way for transaction costs for Aurizon Network can be reduced is for the system rules to indicate that pre-determined switches can be done without TSE penalty, while others will count as cancellations and new services on the day of operation, based on the operating characteristics of the system. The Authority is interested in stakeholders' further comments on this matter.

Asciano has argued that TSE consumption should not be recorded against an access holder if the vacated path is used by another train service (Asciano, sub. no. 3: 12).

Making an access holder pay for a path it does not use through a diversion (and thereby cancels its original order) is consistent with one of the key objectives of the take-or-pay regime, which is to ensure 'honesty in contracting' and provide an incentive against hoarding of paths.

However this incentive for an access holder to order paths it actually expects to use needs to be weighed against the benefits to the supply chain of having an incentive for an access holder to cancel its order early enough for another access holder to take up that path.

On balance, to ensure the greatest availability of scarce system paths, it is best to give an access holder an incentive to cancel its order as soon as it knows it will not be using a system path. This will happen if the access holder is not liable for the cost of that path, when another access holder is able to use the network paths that were earmarked to deliver that capacity. The cancelling party would still have an incentive not to hoard paths, as it would never be certain that another access holder would step in, but the sooner it is cancelled, the greater the chance that it would not be liable for the cost.

In this regard, the Authority considers that Aurizon Network's proposal to treat (minor) day-of-operation changes in train destinations as cancellations and new orders (even where the changes do not result in additional capacity being consumed) does not promote the efficient use of rail infrastructure. It is therefore not consistent with the object of the access regime in the QCA Act, which is 'to promote the economically efficient operation of, use of and investment in significant infrastructure by which services are provided, with the effect of promoting effective competition in upstream and downstream markets' (s.138(2)(a)). In addition, it does not serve the public interest in efficient operation of the coal supply chain (s.138(2)(d)).

Therefore, it is appropriate that a simple diversion to a different mine or port, which resulted in the access holder using the same below-rail network path that it had been assigned, would not be recorded as an extra TSE being consumed, even though a change in mine or port would be a switch to a different system path.

As noted in section 2.2, Aurizon Network's draft system rules have defined a system path to consist of a below-rail network path that has been aligned with a specific mine and port. If an access holder cancels its system path but is able to use the same below-rail network path, it is likely system capacity will not be affected.

In addition to the comments raised by stakeholders, the Authority has some concerns about how above-rail dwells are managed in the draft system rules. The length of above-rail dwell times is important for system capacity since longer train stops on the network result in lower capacity being available for other access holders.

Aurizon Network has indicated in its proposal that dwells longer than those specified in the access agreement will be treated as storage. The Authority does not oppose this concept but requires that Aurizon Network, for purposes of providing certainty to access holders, define in the system rules what a dwell is and ensure the definition is consistent with definitions in the access agreements and undertaking. Aurizon Network must also demonstrate through the reporting specified in the system rules that it is dealing with access holders equitably, with third parties receiving the same treatment as its related party operator when assessing whether a requested stop is a dwell or storage.

Recommendation 3.4

The Authority requires the draft system rules to be amended such that:

- (a) an access holder's cancelled system path in the day of operation will not be recorded as TSE consumption against that access holder if another access holder is able to order and use the below-rail network path that was associated with the original system path;**
 - (b) above-rail dwells be clearly defined and consistent with the relevant definitions in the undertaking and access agreements.**
-

Supply Chain Objectives

The undertaking provides two key instances where the priorities in the system rules take precedence over the network management principles. The first is in the Contested Train Path Decision-Making Process for rail scheduling, which allows Aurizon Network to prioritise allocations based on:

- (c)(i) any requirement for giving priority to certain Train Services or certain Unloading Facilities identified within the System Rules (schedule G, appendix 2, clause (c)(i)).*

The second is in the Traffic Management Decision Making Matrix that guides decisions on the day of operation, which specifies that:

Rule 8. For Trains operating in the Central Queensland Coal Region, where a Train Controller has to decide which of two Trains to give priority to, and those trains are operated by different Access Holders, one may be given preference over the other if the Train Controller reasonably believes this is consistent with meeting the coal supply objective(s) detailed in the System Rules (schedule G, appendix 3, rule 8).

Aurizon Network's proposal

Aurizon Network has proposed that, in the case of unforeseen mine- and/or port-related issues affecting access holders' services, it may schedule available alternative paths through the Alteration Decision Making Process in the draft system rules, which specifies that:

7. *In the event of a Loading or Unloading location requesting emergency alterations to a plan, [Aurizon] Network will attempt to accommodate the affected services and may endeavour to offer an alternate path, where paths are available, endeavouring to provide the best solution for the supply chain as a whole (Aurizon Network, sub. no. 1: 21).*

Aurizon Network also proposed that, for the day of operation:

6.1.2 Delays

In the event of a Rail Operator, Infrastructure Provider, including but not limited to GPC, or [Aurizon] Network, causing a delay, [Aurizon] Network will endeavour to provide the best recovery solution for the Supply Chain as a whole. This will include consultation with the Port and Access Holders (Aurizon Network, sub. no. 1: 22).

Stakeholders' comments

Rio Tinto said the system rules should be clearer on how 'best for the supply chain as a whole' was interpreted and that the concept should not take precedence over Aurizon Network's obligation to deliver TSEs to access holders (Rio Tinto, sub. no. 5: 3).

Authority's analysis

In general, the purpose of system rules is to specify in greater detail the way in which Aurizon Network will plan, schedule and control the operation of train services, while remaining consistent with the network management principles. However, for supply chain objectives, the undertaking allows the system rules to take precedence over the network management principles, both for scheduling and day of operation decisions.

It is therefore particularly important that the circumstances where these measures will be applied, and how they will be applied, are clearly set out in the system rules.

The Authority accepts Rio Tinto's concern that the term 'best solution for the supply chain as whole' needs to be better defined in the Capricornia system rules.

Given that below-rail operations are just one part of the supply chain, it is not appropriate for Aurizon Network to act alone in determining the best solution for the supply chain. Rather, it should discuss this with the other participants in the supply chain, including the relevant above-rail operators, port operators and mines.

The Authority therefore requires that Aurizon Network specify in the system rules the basic principles that will be used to assess that best solution, and that those principles be consistent with the undertaking, including the network management principles. In this regard, the

network management principles allow Aurizon Network to include coal supply objectives in the system rules (schedule G, appendix 3, rule 8).

Draft Decision 3.5

The Authority requires the draft system rules be amended such that they include a clear set of principles and coal supply objectives that will be applied in assessing whether a solution is best for the supply chain as a whole.

These principles and objectives must be consistent with the undertaking, including the network management principles.

3.4 TSE Determination and Consumption

Background

Access holders rely on their TSEs to meet their own contractual obligations. If the way in which TSE consumption is computed is unclear to access holders, there is a risk that end users will not be able to transport as much coal to the port as they reasonably expected when their underlying rail agreements – both above- and below-rail – were signed.

This is not consistent with the need for the system rules to operate transparently, efficiently and equitably, to promote competition and improve the operation of the supply chain.

The system rules must have a transparent methodology for determining how TSEs are allocated and consumed at annual, monthly, and weekly levels. This will enable access holders (above-rail operators in this case) to decide how best to manage their rail-haulage agreements, including those with end users, who have their own coal volume targets.

The Authority considers it is particularly important that the system rules include a clear process for recording TSE provision and consumption over a period that is consistent with the standard access agreements, given the implications for the operation of the take-or-pay provisions and the revenue cap.

The Authority has reviewed these issues in the order TSEs are managed in the scheduling process, by addressing their:

- (a) calculation;
- (b) transfer; and
- (c) consumption.

Calculation

Aurizon Network's proposal

Aurizon Network proposed to calculate its TSE obligations on the basis that all contracted TSEs are for reference train services that are specified in terms of a cyclic traffic operated evenly throughout each yearly, monthly and weekly period (Aurizon Network, sub. no. 1: 13).

Further, the nominal weekly entitlement for each origin-destination TSE is proposed to be calculated as the (30-day) monthly TSE divided by the number of days in the month multiplied by the days in the week:

$$\text{Nominal Weekly Entitlement} = (\text{Monthly TSE} / \text{no. of days in month}) * 7$$

As explained in section 2.2, the nominal weekly entitlement is then scaled up by the maintenance multiplier to determine the adjusted nominal weekly TSE.

Stakeholders' comments

Stakeholders were primarily concerned about the lack of clarity around how the draft system rules proposed that TSE levels for a given week will be calculated.

Asciano said the draft system rules stated the calculation of monthly paths was based on 30 days but that nominal weekly TSEs were broken down using the actual number of days in the month (Asciano, sub. no. 3: 7). Further, Asciano said the methodology used for any rounding of paths and for reconciling monthly and weekly TSEs should be made explicit in the draft system rules (Asciano, sub. no. 3: 8).

BMA said it was important that the approach Aurizon Network employed to compute the *annual* TSE level be transparent in order for BMA to endorse the draft system rules (BMA, sub. no. 4: 3). BMA said that, in determining annual TSE levels, Aurizon Network was supposed to account for operational variability in the supply chain by using the operating assumptions outlined in the 2009 Coal Rail Infrastructure Master Plan (BMA, sub. no. 4: 3).

In particular, BMA sought more detail on the methodology by which Aurizon Network proposed to allocate the 12.25%¹³ scheduling flexibility among producers. BMA suggested that the calculation methodology for determining the contracted TSE be clarified to ensure the 12.25% scheduling flexibility adjustment is made to all TSEs currently contracted under existing access agreements.

Separately, Asciano said the draft system rules must be clear on the process that occurred in the event Aurizon Network did not deliver an access holder's TSEs. In particular, Asciano said that, if TSE allocations within weekly or monthly entitlements had not been supplied in the previous month due to network-related reasons, then access holders' monthly TSEs should be recalculated by carrying forward undelivered TSEs for that month to the outstanding annual balance. This annual balance should then be evenly divided over the remainder of the months in the year (Asciano, sub. no. 3: 9).

Rio Tinto echoed Asciano's concerns; it stated that TSE consumption for the access holder should not be recorded if the cancellations or delays affecting the train path the access holder was scheduled to use were caused by Aurizon Network (Rio Tinto, sub. no. 5: 2).

Authority's analysis

The system rules are intended to supplement the network management principles, by offering more detail on issues specific to the system to which they apply. In particular, any access holder will be concerned to know exactly how its contracted train paths will be computed and delivered.

However, Aurizon Network's draft system rules have omitted some key pieces of information required to understand this, including:

¹³ The 12.25% level of scheduling flexibility refers to one of the operating assumptions that Aurizon Network applies to its process of determining annual TSE levels for the Capricornia coal chain, in accordance with the 2009 Coal Rail Infrastructure Master Plan. It is an allowance for the capacity 'consumed' because of the interaction between services on the network, for example when trains stop on a siding to let others pass, or are otherwise delayed because of operational issues on the day of running.

- (a) how annual, monthly and weekly TSE levels are reconciled; or
- (b) what compensation the access holder will receive if Aurizon Network is unable to supply the contractual level of TSEs in a given month (i.e. the draft system rules have not noted whether any TSEs not delivered in a particular month are made up to the access holder in future months or if there is any other mechanism to compensate that access holder); or
- (c) how Aurizon Network will apply the supply chain operating assumptions, and address the issues in the coal rail infrastructure master plans.

Asciano has raised that the draft system rules are unclear about rounding of paths. The Authority accepts that different rounding assumptions can result in a different number of nominal weekly TSEs. The Authority understands that the nominal weekly TSE refers to the number of train orders an access holder can submit for a given week which Aurizon Network will consider is within its contractual entitlement. In this context, the Authority considers it important the access holder be aware about how all its train orders will be treated by Aurizon Network.

The Authority also accepts Asciano's concern that is not clear whether weekly TSE levels are based on 30-day months or the actual number of the days in that month. The draft system rules have indicated that the computation of monthly paths is based on a 30-day month, and that this was consistent with clause 1.3, schedule 1 of the SAA.

However, the Authority notes that there is no requirement in either the SAAs or the network management principles to specify that TSEs are based on a 30-day month. Indeed, the SAAs specify that weekly TSEs are to be based on the number of days in the month (Operator Access Agreement Coal, schedule 1, clause 1.3).

Separately, the Authority accepts Asciano's view that monthly TSEs should be recalculated if Aurizon Network cannot meet its contractual entitlements. However, the Authority does not consider Asciano's proposed remedy (i.e. the TSEs should be recalculated as the outstanding annual balance divided evenly over the remaining months of the year) is workable. In this context, Femol noted that Asciano's proposal to recalculate TSEs is:

... not practical as the capacity of the network would not be able to handle the additional demand. If the network has additional capacity then there will not be any need to carry TSEs forward as they could be provided month by month (Femol: 13).

In this context, the Authority understands Aurizon Network has negotiated a tolerance level¹⁴ in some access agreements with access holders in delivering its monthly entitlements. If this is the case, the draft system rules should include a reference to any tolerance levels because these would affect the application of the maintenance multiplier (described in section 2.2) in determining how entitlements not delivered to access holders in a given month will be managed.

The Authority considers BMA has a legitimate concern about the treatment of the 12.25% allowance for system variability when annual TSEs are computed. Given this allowance applies across all access contracts, Aurizon Network should be able to demonstrate it has been distributed equitably among access holders. The Authority therefore requires that the Capricornia system rules be clear on the treatment of system variability, and how the allowance for that variability is applied across access holders.

¹⁴ This is referred to as an "Allowable Threshold" in the SAA (see Operator Access Agreement Coal, clause 1.1),

The Authority also accepts Rio Tinto's concern that consumption of TSEs should not be recorded against the access holder if Aurizon Network is at fault for causing a delay or cancellation.

On a connected note, the Authority considers that the draft system rules do not address how train paths lost due to emergency possessions, requested by Aurizon Network, will be made up to the adversely affected access holders. The Authority considers Aurizon Network needs to establish a system to provide replacement paths to access holders for paths lost due to emergency and urgent possessions. The Authority's concerns about this mirror those it has about the maintenance multiplier not accounting for unplanned maintenance (discussed in section 2.2).

Draft Decision 3.6

The Authority requires the draft system rules to be amended such that:

- (a) rounding assumptions for nominal weekly (and daily) TSE levels and how monthly TSEs are calculated are explicit;**
 - (b) there is a process in place to provide additional paths to access holders for TSEs not delivered in a particular month due to any Aurizon Network Cause, consistent with the Contested Train Path Decision-Making Process in the network management principles;**
 - (c) Aurizon Network clearly explains how the allowance for system variability is applied across access holders; and**
 - (d) there is a mechanism in place to provide additional paths to access holders for paths lost due to emergency and urgent possessions arising from an Aurizon Network Cause.**
-

Transfer of paths

The various TSEs and related system paths in a coal system can have a variety of origins and destinations. However, all TSEs for a particular coal system make use of common mainline infrastructure. The fact that all TSEs require the mainline should enable access holders to trade different TSEs within their own portfolios to manage mine- and port-related issues.

Aurizon Network proposed that weekly train orders for specific TSEs held by an access holder can be transferred to other TSEs held by that access holder. This can be accommodated if sufficient capacity exists and the transfer does not prevent Aurizon Network from meeting its obligations to other access holders (Aurizon Network, sub. no. 1: 15).

The Authority understands Aurizon Network's intention is that, in submitting weekly train orders before the WTP is finalised, an access holder can 'transfer' a path allocated to a TSE it has for 'Mine A to RG Tanna' to a TSE it has for 'Mine B to RG Tanna' without incurring any TSE consumption penalty.

This transfer would only be permitted if other access holders were not made worse off in the process of accommodating that transfer. These can occur without TSE consumption penalty because the TSE for 'Mine A to RG Tanna' and the TSE for 'Mine B to RG Tanna' both make use of the same mainline infrastructure; the TSEs are therefore, in this context, transferable.

Asciano sought for the transfer process to go further and provide for the transfer of train paths from one access holder to another (for the WTP process). Asciano noted this matter

was being discussed in other consultation processes with Aurizon Network and the Authority, as a way to better manage TSE portfolios. Asciano said:

... the current [Aurizon] Network access regime can be improved by the development and implementation of clearer rules and processes that facilitate more effective and timely transfers, and so allow for improved efficiencies in the management of TSE portfolios. While improvements in the transfer process requires amendments to other processes and documents, not just the system rules, the system rules should be sufficiently flexible to accommodate improvements as they occur. The current draft system rules are largely silent on the issue of transfers (Asciano, sub. no. 3: 4).

Asciano argued that if the system rules were intended to improve flexibility in the supply chain and certainty around TSE obligations, then the rules (in conjunction with the undertaking and access agreements) should address the issue of facilitating the transfer of paths between different access holders to enable increased flexibility within TSE portfolios (Asciano, sub. no. 3: 5).

The Authority notes that there is scope for an access holder to transfer paths within its TSE portfolio through the Contested Train Path Decision-making Process in the network management principles. However, this process is limited as this ability does not extend to the weekly scheduling process more generally.

The Authority considers Aurizon Network's draft system rules have proposed a level of scheduling flexibility that is greater than required by the network management principles. Aurizon Network has allowed the 'transfer of paths' within an access holder's TSE portfolio to occur in the weekly scheduling process, rather than just in the Contested Train Path Decision-making Process.

However, as Asciano notes, the draft system rules do not provide for the transfer of paths between *different* access holders in submitting weekly train orders.

There are clear scheduling benefits from Asciano's suggestion because an access holder, in a particular week of operation, has an option to use less train services than contractually entitled to and transfer these 'unused paths' to another access holder. In doing so, the access holder desiring the transfer does not incur any TSE-related penalties for underutilising its portfolio in that week.

At the same time, if the transfer of paths was allowed across different access holders, then there would be an additional burden on Aurizon Network to determine changes in TSE consumption across two portfolios, rather than one, whenever transfers are requested. Further, it is not clear how such changes would be addressed in the revenue cap and take-or-pay calculations.

On balance, given the complexity of the issues involved in making such a change, the Authority is not minded at this point to require through the system rules that Aurizon Network provide the flexibility to transfer paths between different access holders.

The Authority considers that, should Aurizon Network commit to the transfer of paths between different access holders, it would need to be done as part of amendments to the network management principles in the undertaking, in parallel with any necessary changes to the standard access agreements and other provisions.

Consumption

Aurizon Network said it would prepare weekly TSE consumption reports for each access holder. The weekly report would contain the access holder's:

- (a) adjusted weekly TSEs;
- (b) number of train paths requested;
- (c) number of train paths scheduled; and
- (d) number of train paths actually used.

Aurizon Network proposed that the adjusted nominal weekly TSE level for an access holder would be compared with the *actual* number of train orders that Aurizon Network scheduled for that access holder in the relevant week of operation. The actual number would include orders committed to by Aurizon Network in scheduling orders for the WTP, and additional orders granted in the DTP environment in the week of operation (Aurizon Network, sub. no. 1: 23).

From a scheduling perspective, stakeholders raised concerns about when TSE consumption was actually recorded, namely whether it occurred when a train service was scheduled or ordered and at what point prior to the day of operation.

BMA understood that TSE consumption was not recorded against schedule variations, diversions and cancellations from the WTP until the DTP was finalised (BMA, sub. no. 4: 5). BMA wanted Aurizon Network to confirm that this interpretation of when TSE consumption was recorded was consistent with the draft system rules.

Asciano argued that consumption of paths should only occur if a train had been scheduled rather than ordered, and that it was not appropriate for the draft system rules to suggest consumption was based on train orders (Asciano, sub. no. 3: 9).

Asciano also noted that the primary focus of access agreements was monthly TSEs rather than weekly TSEs (Asciano, sub. no. 3: 8). Asciano said TSE performance appeared to be benchmarked on a weekly basis in the draft system rules, and this was not appropriate given access agreements were based on monthly entitlements.

The Authority considers that, given the operation of the take-or-pay regime and the revenue cap, it is important that the point at which a TSE has been consumed is clearly specified in the draft system rules.

The Authority is concerned that the draft system rules are ambiguous on when a TSE is consumed – an issue raised by both BMA and Asciano. The Authority considers that Aurizon Network’s proposal for determining when a TSE is consumed is not sufficiently clear to promote the efficient use of rail infrastructure. It is therefore not consistent with the object of the access regime in the QCA Act, which is ‘to promote the economically efficient operation of, use of and investment in significant infrastructure by which services are provided, with the effect of promoting effective competition in upstream and downstream markets’ (s.138(2)(a)).

The Authority therefore requires Aurizon Network to amend its draft system rules so they clearly state when a TSE is deemed to be consumed, and how that will be assessed.

In doing so, the Authority does not accept Asciano’s argument that Aurizon Network has proposed that consumption of paths occurs when trains are ordered as opposed to scheduled. The draft system rules have not indicated that this is the case.

Finally, the Authority accepts Asciano’s concern that TSE performance is not benchmarked appropriately. Appendix D of the draft system rules provides a sample weekly report which suggests that access holders’ TSE performance, and therefore their fulfilment of their take-

or-pay obligations, is benchmarked against adjusted nominal weekly entitlements. The Authority considers this does not reflect the contracts since access agreements are based on monthly and not weekly TSEs. Given this, the Authority does not oppose the distribution of weekly TSE performance reports but requires that the draft system rules clearly specify that access agreements are based on monthly TSEs and that take-or-pay obligations relate to annual TSE performance.

Draft Decision 3.7

The Authority requires the draft system rules to be amended such that:

- (a) it is explicit when a TSE is deemed by Aurizon Network to be consumed; and**
 - (b) it is clearly specified that access agreements are based on monthly TSEs, and that take-or-pay obligations relate to annual TSE performance.**
-

4. DISPUTE RESOLUTION AND OTHER MATTERS

For the Capricornia system rules to operate effectively, there needs to be a robust dispute-resolution process, particularly for delays to train operations that occur during the day of operation and cancellations of train services scheduled in the weekly and daily train plans.

Ideally, all coal chain participants should participate in a dispute resolution process. The Authority seeks the views of stakeholders on whether, and how this could occur, given that only access holders are currently able to challenge disputes.

Cross-system traffic with the Northern Bowen Basin coal systems, and possible scheduling and capacity issues associated with the Wiggins Island Coal Export Terminal, may also impact on the system rules.

To remain efficient and equitable, it is anticipated that the system rules will have to be subsequently amended to account for these matters.

4.1 Scheduling and Train Control Disputes

Background

When Aurizon Network prepares the weekly train plan (WTP) and daily train plan (DTP), there may be scheduling disputes between access holders and Aurizon Network. Such disputes could occur because an access holder believes that it has unfairly been disadvantaged in its bid for a contested train path, or that the number of train paths it has received for a particular week of operation does not reflect its contractual entitlements.

There may also be disagreements about Aurizon Network's train control decisions made during the day of operation. For example, access holders may dispute a decision to delay or cancel their scheduled train services, or may feel that another access holder's train service has been unfairly prioritised.

Scheduling and train control disputes need to be resolved in a way that provides confidence to access holders (and other supply chain stakeholders) that fault will be appropriately attributed, and that the parties at fault will compensate affected members of the supply chain accordingly. This will help achieve the goal of transparent, efficient and equitable system rules, which improve the operation of the coal supply chain.

Aurizon Network's proposal

Aurizon Network's draft system rules outlined procedures for determining who is accountable for:

- (a) delays on the day of operation; and
- (b) cancelled train services in the WTP and DTP environments.

The draft system rules proposed that, for cyclic services, only events occurring at the same time or after commencement of the last train cycle for that service will be considered when reviewing the decision (Aurizon Network, sub. no. 1: 23).

Aurizon Network proposed to consult with supply chain stakeholders to ascertain the causes of delays or cancellations using a 'root-cause analysis' approach.

Aurizon Network proposed that the supply chain stakeholders involved in the root-cause analysis would be:

- (a) Aurizon Network;
- (b) adjoining network manager (Queensland Rail);
- (c) port;
- (d) mine; and
- (e) above-rail operator(s) (Aurizon Network, sub. no. 1: 23).

In the event no consensus can be reached on which party was responsible for causing the delay or cancellation, Aurizon Network proposed that it would decide which party was at fault.

Stakeholders' comments

Rio Tinto was concerned about how faults attributed through the dispute-resolution process could be legally challenged. Rio Tinto noted that only access holders could challenge Aurizon Network's decisions. In this regard, clause 17 of both the Operator Access Agreement Coal and the Access Agreement Coal sets out conditions on the dispute-resolution process. Rio Tinto said that other supply chain stakeholders did not have the opportunity to challenge decisions that affected them (Rio Tinto, sub. no. 5: 2).

Rio Tinto also said:

...where the cause of any delay or cancellation is an individual mine, it should be made clear that the particular mine at fault will bear any lost capacity in the System. (Rio Tinto, sub. no. 5: 2)

Authority's analysis

The Authority considers that supply chain participants should be held accountable for the effect of their actions on others. The Authority recognises there needs to be a process for establishing the reasons for delays and disruptions on the network.

Root-cause analysis is a well-established method of determining which supply chain participant has caused a delay on the day of operation, or a train-service cancellation.

Although Aurizon Network has proposed to use root-cause analysis for the Capricornia system, it has not explained in detail how the process will be administered. However, Aurizon Network has specified it will base its root-cause analysis review only on the time period on or after the start of the last train cycle.

The Authority considers this is not transparent or equitable because the true cause of the delay may have occurred before that period began, especially when a significant disruption has caused cascading delays to network operations over an extended duration. In this regard, the Authority considers that Aurizon Network's proposal does not serve the public interest in the efficient operation of the coal supply chain. It therefore is not consistent with the requirement in the approval criteria in the QCA Act that the Authority have regard to the public interest (s.138(2)(d)).

The Authority therefore accepts Femol's recommendation that:

... consideration be given to expanding the timeframe beyond what is proposed for determining delay accountability, so as to achieve a fair and equitable outcome, particularly when major disruptions have occurred. It is recommended that that at least two train cycles or until the reissue of the DTP where out of course running can be adjusted. (Femol: 15)

Separately, the Authority considers that Aurizon Network may have an actual or perceived bias in managing the dispute-resolution process. In particular, Aurizon Network may have an interest in not accepting responsibility for any delays or cancellations, either for itself or for a related party.

Ideally, any dispute-resolution process should operate independently of the parties to a dispute. An independent umpire resolving matters related to delays and cancellations would address the issue of bias in decision making, and be consistent with the transparent, efficient and equitable operation of the system rules.

Equally, involving an independent arbitrator may increase coordination costs and delays associated with finalising the fault-attribution decision. This may not be consistent with improving the efficiency of the underlying coal supply chain.

In forming a view on these matters, the Authority has had regard to the SAAs, under which access holders can refer disputes to an independent expert, arbitrator or other party. The matters can also be referred to the Authority for resolution. While it would not be practical for every scheduling and train control dispute to be resolved by an expert or arbitrator, there are measures in the undertaking that allow the Authority to act if there is a pattern of decisions which favour one party over another (see, for example, clauses 3.2(a)(ii) on *Ring fencing Arrangements* and 9.2.2(c)(xii) on *Reporting* in the undertaking).

These protections provide an incentive for Aurizon Network to act impartially in the first instance, and thereby avoid committing the substantial resources involved in responding to a dispute. Given this, the Authority does not require the system rules to mandate that disputes be resolved by an independent arbitrator, other than the rights that access holders already have under the SAAs.

Separately, the Authority accepts Rio Tinto's position that supply chain participants other than access holders have no avenue to appeal any decision by Aurizon Network on responsibilities for delays or cancellations. However, there is a threshold issue of how any dispute-resolution process would work where parties do not have a contractual relationship with Aurizon Network.

Addressing these concerns necessarily involves the participation of parties other than Aurizon Network and access holders; it requires that miners, port operators, and (in some instances) Queensland Rail be involved. It is unclear to the Authority how the port operator (GPC) and Aurizon Network's adjoining network manager (Queensland Rail) can be part of a dispute process if Aurizon Network assigns fault to them. It is also unclear how Aurizon Network can take any action directly against these parties as they are not in a contractual relationship with it. However, the separate rail-haulage agreements, port access agreements, and access interface deeds (for adjoining networks) can be expected to mitigate these concerns.

The Authority accepts Rio Tinto's view that it is equitable for a mine at fault, which has caused a delay or cancellation of a train service, to bear lost capacity in the system. Delays and cancellations of train services can result in system capacity being lowered for a period of time; miners would therefore not be able to rail as much coal to the port as expected over the affected period. However, the Authority is aware that this will be difficult to implement in practice.

For example, Aurizon Network has proposed to manage delays by providing the best recovery solution for the supply chain as a whole (Aurizon Network, sub. no. 1: 22). However, Aurizon Network has not indicated how miners at fault for a delay or cancellation will compensate other access holders for lost capacity.

The Authority considers that the risk of having to provide compensation for affecting system throughput could be an important driver to incentivise and discipline miners to ensure that their train orders follow the schedule in the day of operation. For such a system to be transparent and equitable, it may be best for an independent arbitrator to perform this role. However, as noted above, an independent arbitrator may be a time-consuming and inefficient way to resolve such issues. The Authority is therefore not currently minded to support introducing an independent arbitrator to adjudicate on these matters.

In any case, managing the impact of delays caused by an individual mine forms part of Aurizon Network's responsibilities as the below-rail network manager. Therefore, Aurizon Network is the party that should be managing access holders' expectations relating to compensation for any capacity loss caused by such delays. Access holders should raise such concerns with Aurizon Network through any compensation provisions in the access agreements, pending any moves to develop an independent process for assessing such matters, which is beyond the scope of system rules.

Draft Decision 4.1

The Authority requires that the draft system rules be amended to increase the period of consideration for reviewing causes of delays and cancellations to be at least two train cycles.

4.2 System Congestion and Cross-system Traffic

Background

System rules must be flexible to accommodate changes in the operating environment of the Capricornia coal supply chain. These changes can arise due to new infrastructure being built within the system and also from new traffic flows originating in other systems.

Stage 1 of the Wiggins Island Coal Export Terminal (WICET) is due to begin operating in 2014 – this terminal will operate alongside RG Tanna in the Capricornia coal chain. This development will increase the complexity of the Capricornia coal chain's operations. Greater coordination efforts between Aurizon Network and supply chain participants may be required to manage system throughput. This will increase the need for any system rules to provide a transparent, efficient and equitable scheduling process.

At the same time, cross-system traffic will also be an issue facing the Capricornia coal chain. Cross-system traffic is relevant to system rules because it affects congestion levels in the network, and can impose greater scheduling pressures on Aurizon Network.

Cross-system traffic will be relevant across the Capricornia, Goonyella and Newlands systems. Cross-system traffic from the Capricornia system uses the ports of Abbot Point (in the Newlands system). Conversely, cross-system traffic from the Goonyella system uses the port at Gladstone (RG Tanna).

Cross-system traffic will be particularly relevant where the Capricornia coal chain has to accommodate trains from the Goonyella coal system via Gregory Junction (see top left hand corner of Figure 1.1, in Chapter 1).

Aurizon Network's proposal

Aurizon Network proposed a governance process for amending the system rules to account for operating environment changes (Aurizon Network, sub. no. 1: 8).

Stakeholders' comments

Stakeholders were concerned that the draft Capricornia system rules failed to address the impacts of WICET and cross-system traffic.

Rio Tinto said that the draft system rules did not explain how capacity impacts imposed by services with WICET as their destination would be managed by Aurizon Network (Rio Tinto, sub. no. 5: 1). In particular, Rio Tinto said it had:

... concerns regarding the capacity of the Capricornia System to handle increased demand following from the Wiggins Island Coal Export Terminal (WICET) Stage 1. [Rio Tinto] considers that capacity in the Capricornia system is a product of both the System Rules (which cover how trains are ordered and scheduled) and the Operating Assumptions (which define the operating mode of the supply chain, such as wells, delays and intervals between trains. (Rio Tinto, sub. no. 5: 1)

Rio Tinto said Aurizon Network's Blackwater and Moura System Operating Principles included assumptions, such as decreases in the intervals between trains, that were not achievable and would impact on the efficiency of the Capricornia coal chain (Rio Tinto, sub. no. 5: 1).

Asciano, Rio Tinto and BMA said that the planning, scheduling and priority order of cross-system traffics needed to be addressed. Asciano and BMA also said the Capricornia system rules should be aligned with other system rules proposed by Aurizon Network i.e. Goonyella system rules (Asciano, sub. no. 3: 4; BMA, sub. no. 4: 2). In particular, BMA said that:

... the System Rules must focus on clear, consistent, transparent and accountable planning and scheduling processes across all coal systems to provide all coal chain parties with planning, scheduling and operational certainty whilst maintaining contractual obligations held under access agreements (BMA, sub. no. 4: 2).

Authority's analysis

The Authority accepts that the system rules must be flexible to address changes in the operation of the Capricornia coal chain. In particular, the Authority notes that the rail infrastructure built to accommodate WICET in the Capricornia coal chain will lead to an increase in available system paths but is likely to make the operating environment more complex. This could lead to greater scheduling and prioritisation conflicts. The Authority also understands that the proposed Surat Basin Railway will create similar issues.

In this context, stakeholders have raised concerns about the related supply chain operating assumptions. These are assumptions on matters such as operating parameters for each element of the coal supply chain.

The assumptions about the flexibility requirements of the coal supply chain and its underlying operating mode are relevant to the system rules. But the undertaking does not explicitly provide for the Authority to review these assumptions, and the assessment of the system rules is not the forum to resolve issues with those assumptions. The Authority therefore encourages stakeholders to raise any concerns with Aurizon Network directly.

At the same time, it is clear that the operation of the Goonyella system rules will impact on the Capricornia system rules as these two systems are integrated via Gregory Junction. Further, this integration will be deepened in light of the new GAPE infrastructure which will enable traffic from the Newlands system to flow through to the Capricornia system (and *vice versa*).

The Authority notes that access holders who do not consider that the supply chain operating assumptions are reasonable, or reflect what Aurizon Network has indicated that the assumptions will say, can refer a dispute to the Authority via the undertaking (clause 11.1.3(d)).

The Authority understands that Aurizon Network is developing draft system rules for the Goonyella and Newlands systems (i.e. the Northern Bowen Basin draft system rules) and anticipates it will submit these in 2013. These rules are likely to impact upon aspects of the Capricornia system rules. However, the Authority considers this matter can be addressed because the network management principles and Aurizon Network's draft Capricornia system rules provide for Aurizon Network to subsequently amend any system rules to accommodate changes in the operational needs of the Capricornia coal chain.

Further, Aurizon Network must consult with access holders when proposing amendments, and access holders can escalate a dispute to the Authority if they are not satisfied with Aurizon Network's finalised amendments (schedule G, appendix 1, clause (d)).

It is also noted that Aurizon Network's draft system rules have not proposed ways in which increased traffic emerging from WICET will be managed. Nor have they proposed how cross-system traffic is to be addressed.

Given this, the Authority anticipates that the Capricornia system rules will need to be amended once WICET comes online and when the Northern Bowen Basin system rules are finalised.

However, there is not currently any formal process in the undertaking for stakeholders to promote changes to the system rules, once the initial rules have been approved by the Authority. Rather, it is up to Aurizon Network to propose changes, and for any access holders who consider the changes are not consistent with the undertaking or access agreements to appeal. Given the impact of the measures in the system rules, the Authority considers that the next undertaking should include an ability for access holders to propose changes, when it is clear that the system rules are not operating effectively.

5. DRAFT DECISION

Aurizon Network has, in its draft Capricornia system rules, proposed a variety of policies and procedures to supplement the network management principles for the Blackwater and Moura coal systems. These measures include, among other things:

- (a) providing capacity information through the critical asset calendar and constraint summaries, rather than an MTP;
- (b) adjusting path availability for the effect of maintenance and construction by using the maintenance multiplier;
- (c) rejecting an access holder's orders if it does not reconfirm its train orders in the WTP by 4 p.m. on Thursday, four days before the next week's schedule begins; and
- (d) treating a change in destination on the day of operation as a cancellation of the original origin-destination TSE and a separate request for a new origin-destination pair.

As required by clauses 7.1(d) and clause 5.2(e) of the undertaking, the Authority has considered:

- (a) whether the draft system rules are consistent with the undertaking including the requirements for preparing system rules in clause 7.1(c)(i), the network management principles (schedule G), the non-discriminatory treatment provisions (clause 2.2(a)(iii)), the standard access agreement principles (schedule E) and standard access agreements, and the proposed new standard access agreements (clause 5.2(n)); and
- (b) whether it is appropriate to approve the draft system rules having regard to the criteria in s.138(2) of the QCA Act.

For the reasons set out in this draft decision, the Authority considers that the draft Capricornia system rules are not consistent with the undertaking.

The Draft System Rules do not sufficiently provide for the equitable operation of System Rules across Access Holders and Access Seekers (should they become Access Holders) and their Customers and the terms of Access Agreements (clause 7.1(c)(i)).

Further, as set out in this draft decision, the Authority considers Aurizon Network's proposals are not consistent with the network management principles for several reasons, including that they do not provide for distribution of an MTP consistent with those principles (schedule G).

The Draft System Rules are not consistent with the terms of access agreements and the access agreement principles, including that they do not specify that take-or-pay obligations relate to annual, and not weekly, TSE performance.

In addition, the Draft System Rules do not provide sufficient flexibility to allow effective operation of the Proposed Standard Access Agreements.

The Authority considers the following matters are relevant to assessing Aurizon Network's proposals in the draft Capricornia system rules against the approval criteria in s.138(2) of the QCA Act. These are important features, meant to be representative of the sorts of issues

which are relevant, but are not meant to be a comprehensive listing off all matters which were relevant under s.138(2):¹⁵

s.138(2)(a)

the object of this part is to promote the economically efficient operation of, use of and investment in, significant infrastructure by which services are provided, with the effect of promoting effective competition in upstream and downstream markets

Aurizon Network's proposal to provide capacity information through the critical asset calendar and constraint summaries, rather than an MTP as set out in the network management principles, does not promote the efficient use of or investment in rail infrastructure (see section 2.2 of this draft decision).

Aurizon Network's proposal for determining when a TSE is consumed is not sufficiently clear to promote the efficient use of rail infrastructure (see section 3.4 of this draft decision).

s.138(2)(b)

the legitimate business interests of the owner or operator of the service

The Authority has had regard to the need for Aurizon Network to plan, schedule and control train services in a way which allows it to efficiently comply with its contractual agreements with access holders.

s.138(2)(d)

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

Aurizon Network's proposal to treat day-of-operation (minor) changes in train destinations as cancellations and new orders, even where they do not result in additional capacity being consumed, does not serve the public interest in efficient operation of the coal supply chain (see section 3.3 of this draft decision).

Aurizon Network's proposal to consider only one train cycle when determining the root cause of a delay or cancellation of a train service does not serve the public interest in efficient operation of the coal supply chain (see section 4.1 of this draft decision).

s.138(2)(e)

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

Aurizon Network's proposal for the maintenance multiplier does not sufficiently address how the system rules provide for compensation of users of the service who are adversely affected by maintenance possessions (see section 2.3 of this draft decision).

¹⁵ Section 138(2)(c) is not relevant as the owner and operator of the service are the same entity. The Authority has had regard to sections 138(2)(f) and(g) but as the system rules do not deal with pricing matters it has not focussed on them.

s.138(2)(h)

any other issues the Authority considers relevant

Aurizon Network's proposed process for allocating contested train paths does not satisfy this criterion because it is not sufficiently transparent to demonstrate that it is not unreasonably favouring its related party above-rail operator, and is not using information asymmetry to preserve its monopoly (see section 3.2 of this draft decision).

Aurizon Network's draft system rules in general are not sufficiently transparent to allow access holders to know what is happening on the network with matters including maintenance, and available paths. This does not allow access holders to efficiently manage their operations, and coordinate their activities with other supply chain participants (see sections 2.3 and 3.2 of this draft decision).

And the rules for demonstrating capacity through the MTP and other documents do not satisfy this criterion because they do not provide sufficient transparency for access holders to be confident that there is sufficient below-rail capacity to provide all contracted train service entitlements (see section 2.2 of this draft decision).

Summary

The Authority considers Aurizon's proposals are not consistent with the objective of Part 5 of the QCA Act (s.138(2)(a)), the public interest, including the public interest in having competition in markets (s.138(2)(d)), the interests of persons who may seek access to the service (s.138(2)(e)), and other relevant issues (s.138(2)(h)). These criteria have been balanced against and outweigh the legitimate business interests of the owner or operator of the service (s.138(2)(b)).

Therefore, for the reasons set out in Chapters 2, 3 and 4, the Authority's draft decision is that it is not appropriate to approve the draft Capricornia system rules, having regard to the criteria in clauses 7.1(c)(i) and clause 5.2(e) of the undertaking. The Authority therefore proposes to refuse to approve the draft system rules under clause 5.2(h) of the undertaking.

For the purposes of clause 5.2(h)(i) of the undertaking, the Authority has set out principles for amending the proposed system rules in Chapters 2, 3 and 4 of this draft decision, and indicated areas where Aurizon Network needs to consult further with stakeholders.

The Authority will consider submissions made in response to this draft decision submitted by Friday, 21 June 2013.

APPENDIX A: LIST OF SUBMISSIONS**Table 1: List of Submissions**

<i>Organisation</i>	<i>Submission number</i>
Asciano	3
BMA	4
Rio Tinto	5
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