

INDEC CONSULTING

REVIEW OF
NORTHERN BOWEN
BASIN DRAFT
SYSTEM RULES



Ref: Q0383

Report Prepared for:

Ms Clotilde Belanger
Senior Analyst

Mr Hires Devaser
Senior Analyst

Queensland Competition
Authority

Ref: Q0383

June 2014

Contact Details:

Mr Peter Shepherd

Tel: 07 3012 6348

INDEC
■

DOCUMENT CONTROL

CONTROL SHEET

Version/ revision No.	File name (& path)	Prepared by (author)	Reviewed by	Approved by	Version date	Security Classificati on
Draft v1	Draft Report/Q0383 Report Draft – Review of NBB System Rules 20140110	Alex King	Sandro Marin	Peter Shepherd	10 Jan 2014	Commercial- in- Confidence
Draft v2	Draft Report/Q0383 Report Draft – Review of NBB System Rules 20140221	Alex King Sandro Marin	Sandro Marin Arthur Smith Dan McKell	Peter Shepherd	21 Feb 2014	Commercial- in- Confidence
Draft v3	Draft Report/Q0383 Report Draft – Review of NBB System Rules 20140411	Sandro Marin	Arthur Smith	Peter Shepherd	11 April 2014	Commercial- in- Confidence
Final	Final Report/Q0383 Final Report – Review of NBB System Rules 20140527	Sandro Marin Alex King	Arthur Smith	Peter Shepherd	2 June 2014	Public
Final	Final Report/Q0383 Final Report – Review of NBB System Rules 20140626	Sandro Marin	Arthur Smith	Peter Shepherd	26 June 2014	Public

DISTRIBUTION HISTORY

Name	Location	Issued date
Chief Executive Officer, Queensland Competition Authority	GPO Box 2257, Brisbane Qld 4001	25 February 2014
Chief Executive Officer, Queensland Competition Authority	GPO Box 2257, Brisbane Qld 4001	17 April 2014
Chief Executive Officer, Queensland Competition Authority	GPO Box 2257, Brisbane Qld 4001	2 June 2014
Chief Executive Officer, Queensland Competition Authority	GPO Box 2257, Brisbane Qld 4001	26 June 2014

CONTENTS

EXECUTIVE SUMMARY	1
KEY RECOMMENDATIONS	1
1 BACKGROUND	6
1.1 INTRODUCTION	6
1.2 2010 ACCESS UNDERTAKING FOR AURIZON NETWORK	6
1.3 PURPOSE OF REVIEW	6
1.4 TERMS OF REFERENCE	7
1.5 CAPRICORNIA SYSTEM RULES	9
1.6 APPROVAL CRITERIA IN THE QUEENSLAND COMPETITION ACT	10
1.7 FINDINGS FROM CAPRICORNIA SYSTEM RULES DECISION	10
2 METHODOLOGY	12
2.1 OVERVIEW	12
2.2 STAKEHOLDER SUBMISSIONS	12
2.3 ROCKHAMPTON OPERATIONS CENTRE	13
2.4 CONSULTATION FRAMEWORK	13
2.5 ANALYSIS OF NBB DRAFT SYSTEM RULES	13
3 REVIEW OF AURIZON NETWORK'S NBB DRAFT SYSTEM RULES	15
3.1 CONSISTENCY WITH AURIZON NETWORK'S 2010 ACCESS UNDERTAKING	15
3.1.1 Assessment criteria	15
3.1.2 Analysis	15
3.1.3 Stakeholder views	15
3.1.4 Network management principles	16
3.1.5 Train service entitlements	16
3.1.6 Equitable treatment of access holders	17
3.1.7 Observations	18
3.1.8 Recommendations	18
3.2 TRANSPARENCY OF NBB DRAFT SYSTEM RULES	19
3.2.1 Assessment criteria	19
3.2.2 Analysis	19
3.2.3 Master train planning process flow chart	19
3.2.4 Understand capacity related information	20
3.2.5 Authority's findings on Capricornia system rules	20
3.2.6 Stakeholder submissions on NBB capacity information	21
3.2.7 Stakeholder submissions on critical asset alignment calendar and critical asset constraint summary	22
3.2.8 Stakeholder submissions on four-week pathing availability plans	23
3.2.9 Verify Aurizon Network train control rules	23
3.2.10 Validate how train path consumption is recorded	23
3.2.11 Performance reporting of train path consumption	24
3.2.12 Observations	25
3.2.13 Recommendations	25
3.3 CONSISTENCY WITH STANDARD ACCESS AGREEMENTS	26
3.3.1 Assessment criteria	26
3.3.2 Analysis	26
3.3.3 Management of day to day variability	27

3.3.4	Consistent application across access holders	27
3.3.5	Flexibility to end users	28
3.3.6	Recommendations	28
3.4	WORKABILITY OF NBB DRAFT SYSTEM RULES	29
3.4.1	Assessment criteria.....	29
3.4.2	Analysis.....	29
3.4.3	Management of NBB system rules	29
3.4.4	Stakeholder views	30
3.4.5	Cost effective operations	31
3.4.6	Promote efficient coal supply chain	32
3.4.7	Recommendations	33
3.5	RECOMMENDED AMENDMENTS TO NBB DRAFT SYSTEM RULES.....	34
3.5.1	Assessment criteria.....	34
3.5.2	Analysis.....	34
3.5.3	Update of master train plan	34
3.5.4	Critical asset alignment calendar	35
3.5.5	Efficiency of four week pathing plan	36
3.5.6	Out of course running and cancellation	36
3.6	RECOMMENDED AMENDMENTS TO 2013 DRAFT ACCESS UNDERTAKING NETWORK MANAGEMENT PRINCIPLES	37
3.6.1	Assessment criteria.....	37
3.6.2	Analysis.....	37
3.6.3	Contested train path decision making process	37
3.6.4	Daily train plan	37
3.6.5	Traffic management decision making matrix	37
3.7	QUALITATIVE ASSESSMENT OF THE IMPACTS OF THE NBB SYSTEM RULES.....	38
3.7.1	Assessment criteria.....	38
3.7.2	Analysis.....	38
3.7.3	Commercial and operational position of users	38
3.7.4	Capacity impacts based on port destination	38
3.7.5	Capacity impacts for maintenance and construction activities	39
3.7.6	Impact of cross system traffic	39
3.7.7	Location of mine.....	40
3.7.8	Observations	41
3.7.9	Recommendations	42
APPENDIX A – TERMS OF REFERENCE		44
APPENDIX B – STAKEHOLDER MEETINGS		52
APPENDIX C – STAKEHOLDER MEETING QUESTIONS – AURIZON NETWORK		54
APPENDIX D –STAKEHOLDER MEETING QUESTIONS – OTHER		55

EXECUTIVE SUMMARY

The review of the Northern Bowen Basin (NBB) draft system rules has been requested by the Queensland Competition Authority (the Authority). The review was completed in consultation with key stakeholders in the supply chain through interviews and through the review of submissions made by the stakeholders in response to the circulated NBB draft system rules.

It is the intent of this review to satisfy the terms of reference drafted by the Authority which are summarised in Section 1.4 and reproduced in full in Appendix A – Terms of Reference.

The system rules intent is to elaborate on the network management principles with the access undertaking and the system rules also need to account of the needs of each coal systems mines and ports. The system rules should also provide the basis for the transparency in the process of the quantification of the system capacity. This is required to build the necessary business case for capital investment and to provide end users with confidence that the investment is required and is efficient.

Indec has framed its suggested recommendations to identify improvements in:

- **Equitable outcomes** – non-discriminatory treatment across access holders, access seekers and their customers;
- **Transparency** – provide greater detail and information on the way Aurizon Network will manage train scheduling, train control, and network capacity; and
- **Promote efficient coal chain operation** – provide operational and efficiency benefits which consider the extra administrative costs Aurizon Network may incur in being more transparent about its train-scheduling and control decisions.

Section 3 of this report contains the detailed analysis and deliberations undertaken prior to arriving at the recommendations. Indec strongly suggests that all stakeholders are provided the opportunity to comment on the recommendations made to ensure that all issues have been adequately considered. Furthermore, the impacts on Aurizon Network to implement any changes needs to be further explored to ensure that any costs associated with the changes do not outweigh the benefits to be gained.

KEY RECOMMENDATIONS

Indec recommends that consideration should be given to the implementation of the following changes:

1. Aurizon Network report in a timely fashion, on the publically available system, the Train Service Entitlements (TSEs) planned to be delivered on the day and the actual TSEs delivered including consideration of late notice agreed changes and any changes made as a result of the management of the live running environment.
2. The NBB 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.
3. Review the cost effectiveness of an independent third party to arbitrate any disputes arising from train service delays/cancelations and any reviews of the cause of train service delay/cancellation exceeding the review timeframe.

4. The Master Train Plan (MTP) including train graphs be supplied to affected parties detailing all path allocations in a form that indicates the time/distance (location) relationship of the train services and other activities (i.e. planned possessions) on the rail infrastructure. Indec notes that the Authority, as parts of its review of the 2013 draft access undertaking, is intending to assess the merits of making a transparent MTP available for all access holders and seekers.
5. Reductions in each access holders' TSE allocation that are lost due to changes in the three week "lockdown" period of their four week pathing availability plan should be considered as Aurizon Network cancellations.
6. Business rules for how the port shipping demand profile is to operate need to be developed and then agreed between the affected parties and once finalised they will need to be incorporated into the system rules.
7. The Business Execution Rules (BER) is verified against the requirements of the network management principles (2010 undertaking, schedule G, Appendix 3) and amended accordingly to ensure compliance. Once this has been completed, and following appropriate consultation has taken place, the BER should be incorporated into the NBB system rules.
8. Aurizon Network demonstrate through the issue of a MTP the level of practical capacity available on the network with consideration of the applicable 'K' factor¹ for the network and other capacity restrictions. Indec notes that the Authority, as part of its review of the 2013 draft access undertaking, is intending to assess the merits of making a transparent MTP available for all access holders and seekers.
9. Aurizon Network demonstrate through the issue of a MTP the allocated capacity versus practical capacity. Indec understands that the Authority is intending to assess the merits of making a transparent MTP available for all access holders and seekers as parts of its review of the 2013 draft access undertaking.
10. Aurizon Network develop a more comprehensive performance report on train path consumption and network performance which uses the ARTC reporting framework as a guideline.
11. The NBB system rules incorporate a set of coal chain objectives that establish a framework for decision making and the degree of flexibility available in the day to day operations of the system.
12. Section 6.1 "Types of Requests to Alter Train Services" be amended to include that end users contracting under the alternative standard access agreement can vary the allocation of their access rights between their nominated above-rail operators.
13. The change from Recommendation 11 should however be made under the system rules for changes to the Intermediate Train Plan where:
 - a. Any changes to the 72 Hour Schedule outside of the 48 Hour Schedule will not result in TSE consumption; and

¹ K factor represents a comparison of the theoretical capacity (train paths available) of the rail system with the practical capacity (train numbers that can reliably be operated) expressed as a percentage.

-
- b. Should an access holder request changes to the 48 Hour Schedule, additional TSE consumption may result.
14. The scope of the modification process for the NBB system rules is expanded to include affected parties² in the consultation process to ensure that they are informed of any proposed changes. This could be addressed through the Authority's review of the provisions for amending the system rules in Aurizon Network's 2013 draft access undertaking.
15. Aurizon Network be required to provide a copy of any submissions it has received to amend the system rules to all affected parties. This could be addressed through the Authority's review of the provisions for amending the system rules in Aurizon Network's 2013 draft access undertaking.
16. The Authority reserves the right to be able to direct Aurizon Network to undertake a review of the NBB system rules as required by the Authority. This could be addressed through the Authority's review of the provisions for amending the system rules in Aurizon Network's 2013 draft access undertaking.
17. Any disputes of the modifications to the system rules can be referred to the QCA by an affected person where they are dissatisfied with the Aurizon Network response. This could be considered by the Authority during its review of the provisions for amending the system rules in Aurizon Network's 2013 draft access undertaking.
18. Changes in the capacity of the NBB system should also consider amendment of the planning for the NBB and the MTP. This could be addressed through the Authority's review of the provisions for amending the system rules in Aurizon Network's 2013 draft access undertaking.
19. Further consideration should be provided to the two key elements to determine how the NBB's operational performance can be more efficiently measured:
- a. Fully monitor and report on the Daily Train Plan (DTP) in both planning and achievement of all TSEs; and
 - b. Monitor and report on the performance of how the Critical Asset Constraint Summary (CACS) is delivered, identification of how any variance in CACS in the three week lock down period is managed, where this led to variances in TSEs, and how the TSE gains from any variance have been allocated.
 - c. Recommendation 17 could be addressed through the Authority's review of the provisions for amending the system rules in Aurizon Network's 2013 draft access undertaking.

² Affected parties are

- Affected Access Holders, Access Seekers and their customers (Affected Persons)
- Affected infrastructure providers (eg Port Operators, Adjoining Network Managers)
- Affected Infrastructure Service Providers
- Railway operators

-
20. All stakeholders are consulted when NBB system capacity, as identified in the MTP, changes by more than plus or minus 5%. This could be considered by the Authority during the review of the provisions for amending the system rules in Aurizon Network's 2013 draft access undertaking.
 21. Relevant stakeholders are consulted when an individual segment on the NBB system has its annual raiiling forecast change by more than 10% from the expected raiiling forecast. This could be addressed through the Authority's review of the provisions for amending the system rules in Aurizon Network's 2013 draft access undertaking.
 22. In addition, the following amendments are considered for further deliberations:
 - a. Aurizon Network to retain all written records during any consultation with affected parties;
 - b. Aurizon Network to provide an annual report to affected parties of the changes in the MTP that covers:
 - c. the cause of the changes in the MTP;
 - d. the impact on past NBB capacity detailed on a monthly basis; and
 - e. the forward impact on NBB capacity for the next 12 months detailed on a monthly basis.
 - f. This recommendation could be included as an issue for consideration during the Authority's review of the provisions for amending the system rules in Aurizon Network's 2013 draft access undertaking.
 23. Aurizon Network to provide a six monthly report to affected parties of the changes in the CAAC that covers:
 - a. the cause of the changes in the CAAC;
 - b. the planned versus actual completion of the CAAC detailed on a monthly basis; and
 - c. revised CAAC for the next 12 months detailed on a monthly basis.
 24. Aurizon Network to retain all written records relating to changes in the planned possessions in any of the locked down periods.
 25. Aurizon Network to provide a six monthly report to affected parties of the changes in locked down possessions that covers:
 - a. the cause of the change to the locked down possession;
 - b. the increase or decrease in rail capacity from the change to the locked down possession; and
 - c. how any increase or decrease in rail capacity from the change to the locked down possession was allocated and used by an access holder.
 26. Consideration be given to amending the decision making process for the out of course running and cancellations to include:

- a. The development of a formal process within Aurizon Network whereby train control decisions relating to delays arising from out of course running and cancellations is validated by Control Centre senior management;
 - b. Publication of responsibility outcomes to affected parties; and
 - c. Weekly reporting of performance against planned distributed to all stakeholders including producers.
27. In relation to Clause 8.3 (ii) of the network management principles (Schedule H), which stipulates that 'where the relevant access holders agree amongst themselves who should be allocated the contested train path, the contested train path will be allocated as agreed by the access holders, it is suggested that consideration be given to amending the clause or system rules (or both) to:
 - a. Facilitate the mechanism to enable this discussion to occur in a timely manner; and
 - b. Provide transparency for access holders to have visibility of available surplus train paths in a form that indicates the time/distance (location) relationship of the train services and other activities (i.e. planned possessions) on the rail infrastructure.
28. Amend Clause 3.1 (a) of the network management principles to incorporate other expected possessions such as the expected possessions for making good unplanned defects on the rail system, and any expected possessions required for increasing system capacity.
29. Remove Clause 3.3 (c) (i) (B) (3) of the network management principles as it allows Aurizon Network to make modifications to the MTP for "any other operational constraint" as that this clause is too vague and does not require consultation with any access holders to gain their agreement for the change to the MTP.
30. In order to assess the impact of the NBB system rules on various users, consideration is given to completing further analysis including dynamic system capacity modelling to:
 - a. Assess the impacts of cross system traffic on all users including the impacts of the introduction of additional traffic;
 - b. Assess if potential biases against long haul mines occurs from the allocation of additional capacity and if biases are found to exist, what changes are required to remove the biases and what are the operational impacts on all users; and
 - c. Consider the introduction of a priority train plan which considers the port destination operating mode and the criticality of on-time running. The potential impacts on all users would need to be considered as would the costs of introducing and managing such a system.
31. NBB system rules need to take into consideration the effect on substantial increases in traffic and throughput levels and step tranche increases in available capacity. It is recommended that prior to the connection of adjoining infrastructure to the NBB system, such a connection triggers an automatic review of the NBB system rules. This could be addressed through the Authority's review of the provisions for amending the system rules in Aurizon Network's 2013 draft access undertaking.

1 BACKGROUND

1.1 INTRODUCTION

The Queensland Competition Authority (the Authority) is an independent statutory body with a key role to assist in the implementation of competition policy in Queensland. The Authority regulates Queensland's declared rail infrastructure, which includes the below-rail assets managed by Aurizon Holdings Ltd, through its subsidiary Aurizon Network Pty Ltd.

On the 5th of August 2013, Aurizon Network submitted draft system rules for the Northern Bowen Basin (NBB) dated 26 July 2013. The NBB comprises two interconnected coal systems, Goonyella and Newlands, which are connected by the Goonyella Abbot Point Expansion (GAPE) system. The system also has connectivity and interdependency with the Aurizon Network managed Capricornia Coal Chain.

1.2 2010 ACCESS UNDERTAKING FOR AURIZON NETWORK

On 1 October 2010, the Authority approved the 2010 access undertaking for Aurizon Network. The 2010 undertaking regulates the activities of Aurizon Network as the monopoly supplier of the below-rail infrastructure in central Queensland that is used to transport coal between the region's mines and ports. Access holders to Aurizon Network's rail infrastructure can either be train operators or coal miners, and the 2010 undertaking includes Standard Access Agreements (SAAs) that can be used by these parties.

The 2010 undertaking sets out the principles for the pricing of access, and for the development and allocation of new capacity. It includes network management principles in Schedule G, which specify procedures for scheduling train services on the network, and the rules for coordinating train movements across the network on the day of operation.

The 2010 access undertaking provides for Aurizon Network to develop system rules, which elaborate on the network management principles to suit the priorities of each coal system's mines and ports. The 2010 undertaking requires Aurizon Network, when making and amending system rules, to have regard to:

- the equitable operation of the 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)).

While the NBB draft system rules are being considered under the 2010 undertaking, the Authority is also reviewing Aurizon Network's 2013 draft access undertaking, which includes a different set of network management principles to those in the 2010 undertaking. The 2013 access undertaking will affect the operation and application of the NBB system rules in the future.

1.3 PURPOSE OF REVIEW

The purpose of this review is to provide technical advice to assist the Authority in its review of Aurizon Network's NBB draft system rules. The Authority has established assessment criteria for the review of the NBB draft system rules, as specified in the Authority's Terms of Reference dated 20 September 2013 (see Appendix A – Terms of Reference).

This report reviews the NBB draft system rules in accordance with the assessment criteria outlined in the Authority's Terms of Reference. The Authority has elected not to proceed with item 2(h) which involves a quantitative assessment of the capacity impacts (based on dynamic modelling) of the rules on various users, groups of users, and ports in the NBB system.

1.4 TERMS OF REFERENCE

In summary, the assessment criteria included in the scope of this review are outlined below:

- a) Assess whether the NBB draft system rules are consistent with the 2010 undertaking's requirements, including:
 - i. the requirements for providing capacity-related information and scheduling trains in the network management principles (clause 7.1(a) and Schedule G);
 - ii. access holders' train service entitlements (see clause 7.2(a) for a description of the constraints affecting these); and
 - iii. the requirement for equitable treatment of different access holders (and, if access holders are train operators, their customers) (clause 7.1(c)(i));
- b) Assess, having regard to stakeholder submissions on the draft NBB rules, and to the Authority's Capricornia draft decision, whether the rules are sufficiently transparent for access holders, auditors and the Authority to:
 - i. understand the capacity related information (master train plan, critical asset constraint summaries, four-week pathing availability plans and associated documents) provided by Aurizon Network;
 - ii. verify that Aurizon Network's proposed rules for train-control decisions in the day of operation are:
 - o consistent with the traffic-management decision-making matrix in the network management principles (2010 undertaking, schedule G, Appendix 3); and
 - o reasonable, taking into account the objectives of safe network operations, non-discrimination between access holders, train operators, customers and terminals, maximising throughput, and minimising transit times;
 - iii. validate how train path consumption is recorded, and whether it is being done so in a non-discriminatory manner, and how it affects access holders' future train service entitlements;

-
- c) Assess whether the rules are consistent with the relevant terms in the Standard Access Agreements e.g. do they:
- i. set out reasonable, well-defined coal supply chain objectives, as allowed for in the 2010 undertaking's network management principles (Schedule G, Appendix 3, Rule 8), to manage day-of-operation variability;
 - ii. apply consistently across all access holders and train operators; and
 - iii. provide flexibility to end users (under the alternative SAAs) to reallocate access rights between their nominated above-rail operators at short notice (see clause 2.3(f) of End User Access Agreement for the 2010 undertaking)
- d) In addition to the matters discussed in (a) to (c) above, assess whether the draft NBB rules are workable for all stakeholders, including whether they:
- i. provide for cost-effective operations for supply chain participants including mines, ports, and above-rail operators; and
 - ii. promote the efficient operation of the coal supply chain, and ensure that the efficiency benefits more than offset the extra administrative costs Aurizon Network may incur in being more transparent about its train-scheduling and control decisions.
- e) Advise the Authority on amendments to the draft NBB rules, in respect of (a) to (d) above, that would provide for a:
- i. reasonable and feasible approach to recording, reporting and auditing information required for the transparent, equitable and efficient operation of the coal supply chains; and
 - ii. suitable way to achieve 'equitable operation of the system rules' in the context of different access holders' train service entitlements;
- f) Advise the Authority on potential amendments to the 2013 draft access undertaking's network management principles (Schedule H in) that would promote the transparent, efficient and equitable operation of the system rules. The consultant will have particular regard to the:
- i. contested-train path decision-making matrix, which is used to produce the intermediate train plan (clause 8 of schedule H);
 - ii. rules for amending the daily train plan (clause 5.4 of schedule H); and
 - iii. rules underpinning the traffic-management decision-making matrix (clauses 7.4 and 9 of schedule H).

- g) Qualitatively assess whether (and how) the rules:
- i. affect the relative commercial and operational positions of users (or groups of users) of the NBB system's different ports¹, having regard to the operating modes of the system's supply chains;
 - ii. reduce or increase capacity for:
 - o train services destined for users of either or both of the Goonyella coal system's port terminals (i.e. DBCT and HPCT), and for users of APCT; and
 - o maintenance and construction activities (i.e. planned possessions); and
 - iii. adequately address the impacts of cross-system traffic – e.g. train services entering the NBB system from Capricornia (and possibly the Galilee Basin in the future).

1.5 CAPRICORNIA SYSTEM RULES

The Authority made a draft decision on 24 April 2013 and a final decision on 27 February 2014 relating to the Capricornia system rules and these decisions will establish principles³ which are applicable to the NBB system rules review. The Authority's draft decision rejected Aurizon Network's draft Capricornia system rules (comprising of Blackwater and Moura systems). The Authority considered the Capricornia system rules needed to be transparent, equitable, and consistent with the network management principles and terms in the SAAs.

The review of the NBB draft system rules therefore requires consideration of the Capricornia system rules review to ensure that applicable principles apply consistently across both systems. The applicable principles from the Capricornia system review are listed below:

- **Equitable** – non-discriminatory treatment across access holders, access seekers and their customers;
- **Transparent** – provide greater detail and information on the way Aurizon Network will manage train scheduling, train control, and network capacity;
- **Consistent with SAAs and Schedule E** – do not conflict with terms in standard access agreements; and
- **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)).

³ Queensland Competition Authority Capricornia Final Decision, February 2014, page 9

1.6 APPROVAL CRITERIA IN THE QUEENSLAND COMPETITION ACT

In addition, the consideration of these matters is supported by the approval criteria in Section 138 (2) of the Queensland Competition Authority Act 1997⁴:

- **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;
- **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
- **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).

1.7 FINDINGS FROM CAPRICORNIA SYSTEM RULES DECISION

The review of the NBB draft system rules has considered the outcomes and recommendations from the Authority's draft and final decisions regarding the Capricornia system rules to ensure regulatory consistency. At the time Indec commenced its review, the Authority had released its draft decision on the Capricornia system rules. The Authority released its final decision on the Capricornia system rules towards the end of Indec's review of the NBB draft system rules. The Authority subsequently requested Indec to consider the outcomes of the final decision on the Capricornia system rules before finalising the review of the NBB draft system rules.

Indec completed its independent analysis of the NBB system rules and considered the recommendations from the Capricornia systems rules review and where appropriate maintained consistency. In particular, the review of the NBB draft system rules was cognisant of the following requirements arising from the Capricornia system rules review:

- Production of train graphs to show path availability, prompt updating of the Aurizon Network portal, including involvement of users in the planning process;
- Paths be more accurately/appropriately defined based on the mainline path concept which identifies the common portion of the rail infrastructure that is used by all access holders;
- Process and quality of maintenance planning consultation and information be stipulated;
- Process for calculating and providing additional paths to compensate for maintenance possessions to be clearer;
- Greater clarity and commitment to enable users to take up spare capacity in the weekly train plan;
- Clearer commitment on Contested Train Path process, clarity on port/rail interaction, clear statement on status of paths in the Master Train Plan (MTP) so that Aurizon Network can demonstrate that, for example, better paths with shorter scheduled below-rail transit times are not inequitably distributed between different access holders and customers;

⁴ Ibid

-
- Promptness and accuracy of the DTP;
 - Users not to be penalised if unused paths are taken up by others;
 - Principles be incorporated regarding the overall interests of the coal supply chain;
 - Clarity on calculation of system variability and train service entitlements (TSEs), compensation for Aurizon Network TSE cancellations;
 - Further clarification on TSE consumption including reference to monthly entitlements and annual performance; and
 - Increased period for review of delays and cancellations.

Indec highlighted any recommendations from the Capricornia system review which were applicable to the NBB system rules and excluded those which were not appropriate to apply to the NBB system due to practical or operational reasons.

2 METHODOLOGY

2.1 OVERVIEW

Indec's methodology was developed in consultation with the Authority to ensure that the review addressed the key technical components outlined in the Authority's assessment criteria. The Authority provided background briefings to Indec and made available the following documents:

- QR Network's 2010 Access Undertaking as approved 1 October 2010;
- Draft Decision Capricornia System Rules April 2013;
- QR Network Operator Access Agreement Coal for 2010 access agreement (proforma);
- Aurizon Network End User Access Agreement for 2010 access agreement (proforma);
- Aurizon Network Draft System Rules, North Bowen Basin 26 July 2013;
- Aurizon Network, The 2013 Undertaking 30 April 2013;
- Authority staff's meeting notes from NBB workshop held on 5 June 2013 provided to Indec on 20 November 2013;
- Final Decision Capricornia System Rules February 2014; and
- Stakeholder responses to QR Network Draft North Bowen Basin Rules (September 2013):
 - Anglo American, including proposed drafting for the 'status quo' rule provided to Indec on 14 Jan 2014;
 - Asciano;
 - BMA;
 - Glencore;
 - Peabody; and
 - Vale.

Indec's methodology to complete the review of the NBB draft system rules included the following key tasks:

- Review of relevant background material and briefings with the Authority;
- Review of stakeholder submissions;
- Consultation meetings with stakeholders;
- Site visit to the Rockhampton Operations Centre;
- Analysis of key issues against assessment criteria;
- Development of draft recommendations;
- Discuss draft findings with the Authority; and
- Finalise review and recommendations.

2.2 STAKEHOLDER SUBMISSIONS

Indec reviewed the stakeholder submissions made to the Authority on the NBB draft system rules to identify the issues of relevant concern raised by the various stakeholders. This provided Indec with an understanding of the key issues to be further explored during the stakeholder consultation and analysis stages.

2.3 ROCKHAMPTON OPERATIONS CENTRE

Indec's review included a site visit to the Aurizon Network's Rockhampton Operations Centre to observe at first-hand how the daily train movements are managed. The visit to the operations centre provided Indec with some insight into Aurizon Network's train control systems and operating practices. This visit added value to the review as Indec briefly observed the train control operations in practice and spent some time with the Control Centre Manager to discuss the planning, scheduling and path allocation processes and control of the operation of train services in each of the NBB coal systems.

2.4 CONSULTATION FRAMEWORK

Indec completed a number of stakeholder meetings to provide a forum for stakeholders to elaborate on the key issues relating to the NBB system rules and for Indec to explore the issues raised by stakeholders in greater depth. Details of the stakeholder meetings can be found in Appendix B – Stakeholder Meetings.

Prior to undertaking the stakeholder meetings, Indec reviewed the relevant documents to gain a deeper understanding of the planning, scheduling and path allocation processes applicable to the NBB coal systems. Indec also reviewed all the stakeholder submissions received by the Authority.

Indec prepared a list of stakeholder questions to guide the discussions and the information to be sought from stakeholders. A draft set of questions was made available to the Authority prior to the stakeholder meetings being held. Appendix C contains the list of question asked at the Aurizon Network meeting and Appendix D contains the questions asked at other stakeholder meetings.

With the assistance of the Authority, Indec met with the following stakeholders to discuss the review of the NBB draft system rules:

- Anglo American;
- Asciano;
- Rio Tinto;
- Peabody;
- Vale;
- Aurizon (Above Rail); and
- Aurizon Network.

The stakeholder meetings proved to be a valuable source of information and informed the analysis and the development of the recommendations made in this report. The contributions made by the stakeholders and the issues raised are noted in the relevant sections of this report.

2.5 ANALYSIS OF NBB DRAFT SYSTEM RULES

Indec completed an analysis of the NBB draft system rules against the assessment criteria provided by the Authority. Each assessment criterion involved particular areas of focus for analysis and Indec's observations and recommendations are noted in detail in Section 3.

Indec's focus for delivering this review is to independently assess the issues based on the views and needs of both the users and Aurizon Network, using our team of experienced train operators supported by a commercial team. Indec applied its experience and knowledge of heavy haul rail systems when reviewing the NBB draft system rules to develop practical and implementable solutions.

Indec's rail and port operations specialists scrutinised the system rules proposed by Aurizon Network to determine whether the rules have evolved into a framework that will ensure that users and operators can extract the maximum feasible train path capacity from the systems. Indec assessed in detail what the rules mean at a practical level by placing ourselves in the shoes of the front-line managers from all parties whose job it is to get trains to the ports every day with minimum unpredictability and maximum efficiency.

3 REVIEW OF AURIZON NETWORK'S NBB DRAFT SYSTEM RULES

This section of the report considers each of the technical components subject to review. The issues are identified and assessed against the assessment criteria including considering the views of the stakeholders. The key observations of Indec's analysis and stakeholder consultation are summarised including recommendations to address the issues identified.

3.1 CONSISTENCY WITH AURIZON NETWORK'S 2010 ACCESS UNDERTAKING

3.1.1 Assessment criteria

Assess whether the NBB draft system rules are consistent with the 2010 undertaking's requirements, including:

- the requirements for providing capacity-related information and scheduling trains in the network management principles (clause 7.1(a) and Schedule G);
- access holders' train service entitlements (see clause 7.2(a) for a description of the constraints affecting these); and
- the requirement for equitable treatment of different access holders (and, if access holders are train operators, their customers) (clause 7.1(c)(i)).

3.1.2 Analysis

Indec undertook a review of the NBB system rules against the requirements of the 2010 Undertaking's Clause 7.1(a) and Schedule G (Network Management Principles).

The draft system rules have been formulated in line with the requirements of the network management principles detailed in the 2010 undertaking. There are however a range of issues regarding:

- the level of transparency provided in the capacity related information with uncertainty across stakeholders about exactly how much capacity the NBB System has and how it is being allocated;
- how the draft system rules will operate, with detailed concerns on how TSEs will be managed and their consumption measured; and
- concerns about a number of the specific processes that Aurizon Network has proposed to manage planning from the MTP through an Intermediate Train Plan and into the delivery of a Daily Train Plan (DTP) and how equitable they are. A particular concern arose in relation to the 7 day weekly planning process compared to a rolling 10 day schedule in forming the Intermediate Train Plan.

3.1.3 Stakeholder views

There was a divergence in the views expressed by stakeholders in their submissions on how consistent the NBB draft system rules are with the 2010 undertaking's requirements. Some stakeholders have suggested that greater transparency is required in relation to capacity related information and a concern was raised that the amendment process may not be consistent with the network management principles. The views of stakeholders are summarised below.

BMA

BMA stated in its submission:

We believe the NBB system rules are consistent with schedule G of the 2010 Access Undertaking and provide additional information and transparency around how schedule G is implemented within Aurizon Network.⁵

Anglo American

Anglo American is of the view that:

The amendment process in the NBB Rules inappropriately reflects the plan alterations process in schedule G of UT3 (both of which require reconsideration.)⁶

Asciano

The views of Asciano are that:

A more transparent process should be considered. For example the existing Schedule G Contested Train Path process could be considered.

There appears to be no reason why the contested train path process cannot be applied despite each train departing from a different origin⁷.

3.1.4 Network management principles

The draft system rules have been formulated in line with the requirements of the network management principles detailed in the 2010 undertaking. There are however a range of issues regarding:

- the inability to see the total level of effective capacity⁸ on the NBB; and
- how access holder's TSE entitlements fit into that capacity.

3.1.5 Train service entitlements

Indec has not been provided with information from the access holders on how their TSEs have been formulated and whether it is consistent with the requirements of the 2010 undertaking's clause 7.2(a). The detail of each access holders' TSE is set out in their relevant access agreement. Indec has not identified it as an issue of concern as no stakeholder has raised this as an issue.

However all stakeholders expressed concerns on how TSEs will be managed and their consumption measured by Aurizon Network, and Indec has made some recommendations in section 3.1.8 to deal with these concerns.

⁵ BMA Submission to the QCA Review of the Aurizon Network Draft Northern Basin System Rules, undated, page 5

⁶ Anglo American Submission on Aurizon Network's Northern Bowen Basin System Rules, September 2013, page 6

⁷ Asciano Submission to the QCA Review of the Aurizon Network Draft Northern Bowen Basin System Rules, September 2013, pages 10-11

⁸ The NBB system capacity that is available to access holders through their cyclical traffic entitlements. It does not include system timetabled traffic, known possessions or higher priority cross system traffic.

3.1.6 Equitable treatment of access holders

The Authority in its draft and final determination on the Capricornia System Rules⁹ developed its assessment criteria for what it considers to be “equitable “on a wider basis than just “access holders”, which are reproduced below:

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

Equitable – non-discriminatory treatment across access holders, access seekers and their customers...;

The NBB draft system rules appear to provide for equitable treatment of different access holders with Aurizon declaring in Section 10 of the Draft NBB System Rules:

In scheduling train services, Aurizon Network’s primary responsibility is to maximise the system available pathing for the equitable distribution of TSEs¹⁰

Specifically the NBB system rules in the sections on train scheduling and train operations are compliant with Schedule G Appendixes 2 and 3 respectively.

Indec has concerns that whilst the NBB system rules measure the outcomes¹¹ of:

- TSEs; and
- Schedule (Delays and Cancellations of trains against the DTP).

The measurement of how equitable Aurizon Network’s performance is lies to a very large extent with Aurizon Network to determine. Section 10 of the Draft NBB system rules outlines how delays outside the DTP will be managed (relevant extracts are highlighted below):

For a delay to a train service that has occurred in exception to the DTP, Aurizon Network will identify and consult with relevant supply chain stakeholders in determining the cause of the delay by conducting a root cause analysis. For a train service that is a cyclic traffic, the process will be limited to reviewing possible causal incidents that occurred on or after the commencement of the last train cycle.....

.....Where no decision can be reached collectively, Aurizon Network will determine the cause of the delay. Where a dispute arises with the determined cause, the affected access holder can escalate the dispute through the dispute resolution mechanisms of their relevant access agreement¹².

A number of stakeholders expressed concern that Aurizon may not be in a position to provide equitable treatment to different access holders. Vale’s submission made the following comment:

⁹ Queensland Competition Authority Capricornia Draft Decision, 24 April 2013, page 7 and Queensland Competition Authority Capricornia Final Decision February 2014

¹⁰ Draft NBB System Rules P19

¹¹ Draft NBB System Rules Section 10

¹² Ibid

*Vale does not support the process that allows Aurizon to be the final determinant of any cause of delay or cancellation. Vale believes the causation of a disputed delay or cancellation should be completed by an independent body that does not have any commercial incentives in the process.*¹³

3.1.7 Observations

The level of transparency provided in the capacity related information to understand how much capacity the NBB System has and how it is being allocated is a fundamental prerequisite to ensure the equitable treatment of different access holders. It provides stakeholders with a greater understanding of the capacity available and assists in the planning for the timely and efficient implementation of capacity expansion.

The level of transparency and information made available provides all stakeholders with visibility on the:

- basis for the quantification of the network capacity;
- impact of track possessions for planned maintenance and how they are managed;
- effective use of the network;
- delivery of the track possessions to the plan; and
- future investments needs.

The recommended regime would provide information that enables the access provider to demonstrate the requirement for additional below rail capital investment. It should also provide for the quantification of the daily capacity of the network and the network impacts of late running in the network capacity. This would provide the basis for a common understanding of the importance for the reliable and punctual participation of supply chain members. An example of this regime is the effort and emphasis that the Australian Rail Track Corporation places on this aspect of their responsibilities.

3.1.8 Recommendations

The integrity of the performance reporting and the management of delays to services on the NBB system are critical for ensuring transparency and for the equitable treatment of different access holders. In order to improve transparency of capacity related information and improve equitable outcomes of the management of train service delays/cancellations, Indec recommends that consideration should be given to the implementation of the following changes:

- Aurizon Network report in a timely fashion, on the publically available system, the TSEs planned to be delivered on the day and the actual TSEs delivered including consideration of late notice agreed changes and any changes made as a result of the management of the live running environment;
- The recommendation from the Final Decision on the Capricornia System Rules regarding the length of time for reviewing causes of delays and cancellations should be adopted for the NBB, with the Authority's finding reproduced below;

*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.*¹⁴

¹³ Vale Submission to the QCA Review of the Aurizon Network Draft Northern Basin System Rules, 26 September 2013 page 3

¹⁴ Queensland Competition Authority – Final Decision Capricornia System Rules – Decision 4.1

- Review the cost effectiveness of an independent third party to arbitrate any disputes arising from train service delays/cancellations and any reviews of the cause of train service delay/cancellation exceeding the review timeframe. Indec does not believe that it would be cost effective for an independent party to review all causes of train service delay/cancellation; and
- The MTP including train graphs be supplied to affected parties detailing all path allocations in a form that indicates the time/distance (location) relationship of the train services and other activities (i.e. planned possessions) on the rail infrastructure. Indec recognises the Authority has, in its final decision on the Capricornia System Rules, discussed the merits of making the MTP transparent.

3.2 TRANSPARENCY OF NBB DRAFT SYSTEM RULES

3.2.1 Assessment criteria

Assess, having regard to stakeholder submissions on the draft NBB rules, and to the Authority's Capricornia draft and final decisions, whether the NBB system rules are sufficiently transparent for access holders, auditors and the Authority to:

- understand the capacity related information (MTP, critical asset constraint summaries, four-week pathing availability plans and associated documents) provided by Aurizon Network;
- verify that Aurizon Network's proposed rules for train-control decisions in the day of operation are:
 - consistent with the traffic-management decision-making matrix in the network management principles (2010 undertaking, schedule G, Appendix 3); and
 - reasonable, taking into account the objectives of safe network operations, non-discrimination between access holders, train operators, customers and terminals, maximising throughput, and minimising transit times;
- validate how train path consumption is recorded, and whether it is being done so in a non-discriminatory manner, and how it affects access holders' future train service entitlements.

3.2.2 Analysis

Indec undertook a review of the NBB draft system rules including having regard to stakeholder submissions and of the Authority's Capricornia draft and final decisions as to whether the NBB draft system rules are sufficiently transparent for access holders, auditors and the Authority to:

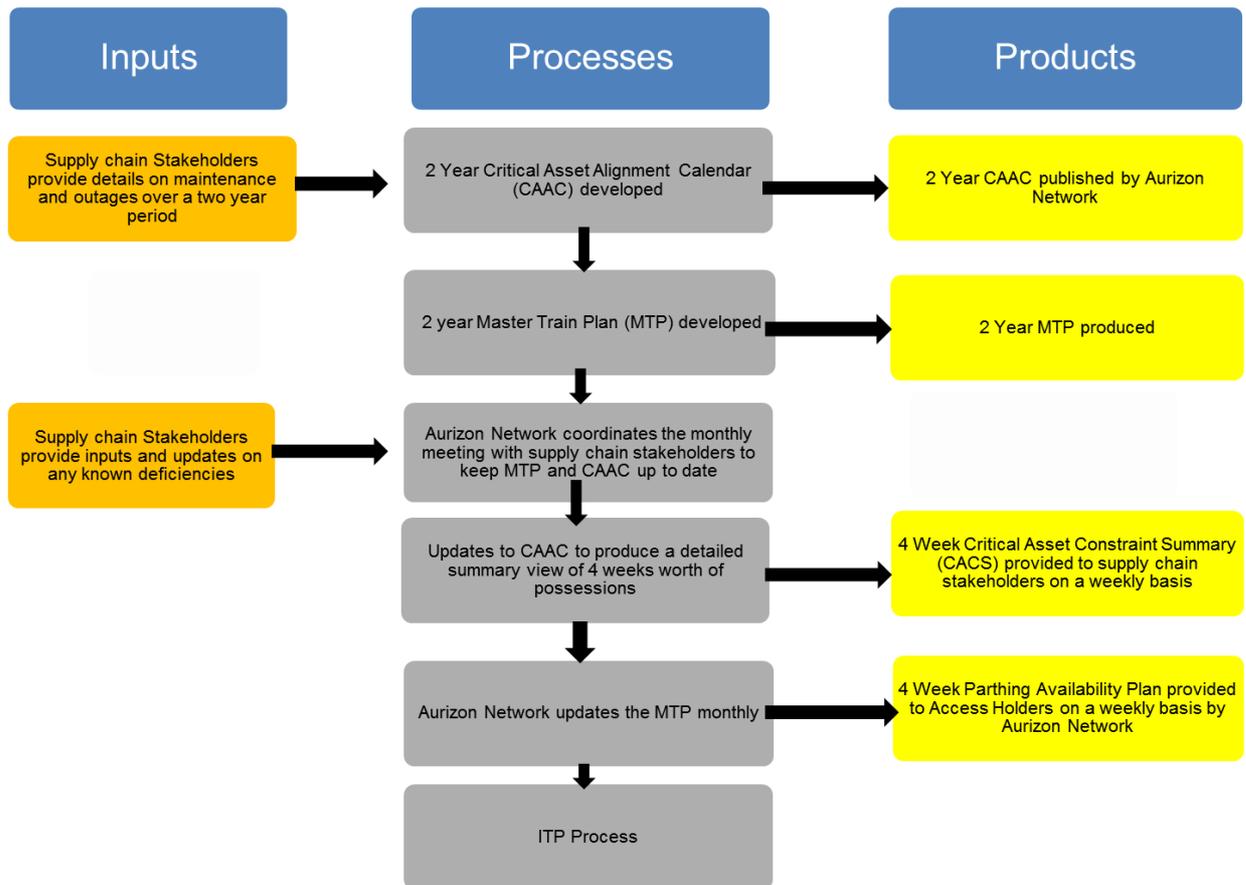
- understand the capacity related information;
- verify Aurizon Network's proposed train control rules; and
- validate how train path consumption is recorded.

3.2.3 Master train planning process flow chart

Indec included in its review the relevant processes depicted in Figure 1 below which shows the master train planning process flow chart¹⁵. This is a diagrammatic representation of the key aspects of Aurizon Network's master train planning process.

¹⁵ Section 4.3, Page 16 Aurizon Network's System Rules – North Bowen Basin

Figure 1 - Master Train Planning Process Flow Chart



3.2.4 Understand capacity related information

Concerns regarding the sufficiency of transparency in the NBB draft system rules for access holders, auditors and the Authority to understand the capacity related information were identified in both:

- the Authority's findings on Capricornia system rules review; and
- in a number of stakeholder submissions on NBB capacity information, critical asset constraint summaries, and the four week pathing availability plans.

3.2.5 Authority's findings on Capricornia system rules

The Authority's findings on the Capricornia system rules review identified that the transparency of capacity information could be improved to promote the efficient use of or investment in rail infrastructure. The Authority noted that the greater transparency of capacity information promotes certainty to access holders that capacity is being managed appropriately and signals the availability of any capacity to potential access seekers. This leads to a more informed market to promote the economically efficient use and investment in rail infrastructure. The relevant extract from the Authority's findings is captured below:

An MTP which provides information about available capacity will also have the effect of promoting effective competition by allowing access holders to confirm that one is not being favoured over another in allocating train paths (the second limb of the objects clause in section 138(2)(a) of the QCA Act). The MTP would also serve the public interest in efficient operation of the coal supply chain, by allowing access holders and their customers to see what paths might be available to use immediately, or to contract for access (s. 138(2)(d) of the QCA Act). All of these outcomes would be in the interests of access seekers and access holders (ss. 138(2)(e) and (h) of the QCA Act).¹⁶

3.2.6 Stakeholder submissions on NBB capacity information

The stakeholder submissions and consultation identified a range of issues regarding how the capacity of the NBB system will be established and then managed on an ongoing basis.

Vale's¹⁷ view is that Aurizon Network's MTP process, as per Figure 1 above, is not fit for purpose as it will not include the Goonyella to Abbot Point Expansion (GAPE) System.

Vale recommends that the NBB MTP should include all the traffic on the Goonyella System.

Peabody takes a similar view to Vale in relation to cross system traffic from both GAPE and the Blackwater system, as captured in the quote below from its submission.

The system rules as drafted do not adequately address cross system traffic issues and the transparency required around the operational delivery of capacity to meet the contractual requirements in each supply chain.

Asciano asserts that the MTP process lacks transparency on NBB System capacity.

Asciano believes that the planning procedure must:

- *identify the redundancy built into the network and thus identify the ability of the network to address maintenance and day of operations variability while still meeting contractual obligations with regard to contracted paths;*
- *identify the days per year that contractual obligations with regard to contracted paths will not be met;*
- *demonstrate that there are system paths which connect an origin with a destination (typically a port slot); and*
- *outline system contracted paths and available paths.*¹⁸

Glencore formally supports the Asciano submission¹⁹.

Anglo American raised significant concerns that the capacity of the NBB system could be increased and that the NBB system rules do not protect the interests of stakeholders.

¹⁶ Queensland Competition Authority Capricornia Final Decision, 24 April 2013, page 17

¹⁷ Vale Submission to the QCA Review of the Aurizon Network Draft Northern Basin System Rules, 26 September 2013 page 2

¹⁸ Asciano Submission to the QCA Review of the Aurizon Network Draft Northern Bowen Basin System Rules, September 2013, page 7

¹⁹ Glencore Submission to the QCA Review of the Aurizon Network Draft Northern Bowen Basin System Rules, 26 September 2013, page 1

The NBB Rules do not provide capacity triggers or review mechanisms in the event of drastic changes to capacity, for example the predicted doubling of capacity in the Newlands system required if the Galilee Basin is connected. ...End users and operators will have no input to how decreased spare capacity, increased total capacity or expansion compression will be managed in relation to mines that have made investments relying on regulatory certainty.²⁰

Peabody expressed its views of what it seeks in regards to the transparency of how NBB capacity is managed.

As supply chains compete with each other for capacity it should be demonstrated how capacity is allocated, recovered due to Aurizon Network issues and transparency where there is inconsistency²¹.

3.2.7 Stakeholder submissions on critical asset alignment calendar and critical asset constraint summary

Aurizon Network identifies constraints²² on the availability of its assets through:

- A two year Critical Asset Alignment Calendar (CAAC) which is used in conjunction with the known requirements for TSE to produce the MTP, and
- a four week Critical Asset Constraint Summary (CACS) which collates more specific details on track possessions closer to the dates when they are to occur.

In stakeholder submissions, Asciano mentioned CAAC and CACS in relation to issue of NBB network capacity and their comments were limited to a daily view of capacity.

While Asciano welcomes the availability of the Critical Asset Alignment Calendar (CAAC) and Critical Asset Constraint Summary (CACS) these documents do not provide sufficient visibility of the capacity that the network can handle on any given day²³.

BHP Billiton Mitsubishi Alliance (BMA)²⁴ comments are limited to the following:

AN introduce a maintenance multiplier or similar and identify how the allowance for variability is spread across access holders within the month via the Critical Asset Alignment Calendar.²⁵

No other stakeholder raised issues relating to the information contained within CAAC and CACS.

²⁰ Anglo American Submission on Aurizon Network's Northern Bowen Basin System Rules, September 2013, page 2

²¹ Peabody Submission to the QCA Review of the Aurizon Network Draft Northern Bowen Basin System Rules, 26 September 2013, page 3

²² NBB System Rules 4.2.1

²³ Asciano Submission to the QCA Review of the Aurizon Network Draft Northern Bowen Basin System Rules, September 2013, page 8

²⁴ Note includes BHP Billiton Mitsui Coal (BMC)

²⁵ BMA Submission to the QCA Review of the Aurizon Network Draft Northern Bowen Basin System Rules, undated, page 5

3.2.8 Stakeholder submissions on four-week pathing availability plans

Aurizon uses a four week pathing availability plan to indicate the possessions for the next four weekly periods with only the possessions for the first three of those weekly periods being “locked down”.

The only stakeholder commentary on the four week pathing availability plan was from Asciano who sought to have TSEs that were lost due to variances in the three week “lockdown” period in their four week pathing availability plan be considered Aurizon Network cancellations.

3.2.9 Verify Aurizon Network train control rules

Verification of the compliance of the daily use by the train control staff of schedule G of the 2010 Network Undertaking Operations Principles could not be witnessed.

This subject formed part of discussions held with the Control Centre Manager during a site visit to the Aurizon Network Train Control Centre at Rockhampton. The Manager advised that Schedule G to the 2010 Network Undertaking was used to manage the network in the live running environment.

Specifically Indec was advised that the decision matrix is routinely applied. Although the daily use of the matrix was not witnessed, in Indec’s experience the decision matrix is typical of the train control decision making process and is universally applied. The Australian Rail Track Corporation applies a decision making matrix as part of their access undertaking arrangement. Indec has observed that the use of a decision making matrix is common practice in an open access environment.

The Control Centre Manager advised that the operating rules that apply to the live operation are an Aurizon Network document entitled the Business Execution Rules (BER). Comments made during the stakeholder meeting suggest that BER have been implemented without consultation with all affected parties. This document was not made available to Indec on the grounds of it being commercial in confidence.

The Control Centre Manager also advised that a four hourly briefing is held with the stakeholders in the supply chain. The telephone meeting is chaired by the Shift Business Manager in the Control Centre and its purpose is to report on the health of the live operation and on actions taken to maintain the DTP.

During the meeting the stakeholders are consulted on the planned changes in the following four hour period.

3.2.10 Validate how train path consumption is recorded

Performance reporting was discussed during the interview with the Control Centre Manager and the informal performance indicator is the delivery of the train plan according to the planned outcome. Indec requested a copy of performance reports which validate how train path consumption is recorded and an example summary KPI report was made available by Aurizon Network. Indec was advised that graphs are produced to describe the daily train plan and to show the actual daily working environment with a report prepared for management. This implies that train path consumption is recorded and reported as an internal performance measure. Indec did not view any supporting documentation or obtain any detailed understanding how the consumption is recorded.

3.2.11 Performance reporting of train path consumption

The example summary KPI report provided by Aurizon Network reports on the following indicators as being a measure of train path consumption performance:

1. Transit time by line section as specified in the TSE measured in 3 minute intervals
 - a) includes consideration of below rail delays
 - b) time taken in crossing other trains if not the fault of the above rail operating company
 - c) time lost due to Aurizon Network maintenance fault or deficiency
2. TSE versus actual trains operated and responsibility for shortfall if any (above rail operating company or Aurizon Network)
3. Track availability - planned versus actual. This appears to be a measure of the Aurizon Network performance against the plan for access to the network.

Indec does not believe that the summary KPI report provided by Aurizon Network represents a comprehensive performance report of train path consumption. Indec believes that a more comprehensive periodic report should be produced which is guided by the Australian Rail Track Corporation (ARTC) reporting framework outlined below. This extract is from the Hunter Valley performance reporting requirement on the rail operating company's overall operating performance.

Reliability Performance Indicators

1. *Number and percentage of services which enter the network no later than schedule within the tolerance threshold*
2. *Number and percentage of services which are operated in a healthy manner*
3. *Number and percentage of unhealthy services that do not deteriorate further within tolerance threshold*
4. *Number and percentages of healthy services that exit the network within tolerance threshold*
5. *Number and percentage of services which exit the Network no later than schedule within tolerance threshold*
6. *Number and percentage of services which exit the Network no later than one hour after schedule*

For this purpose, a healthy service is one which:

- a. *presents to the network within tolerance threshold is configured to operate to its schedule and operates in a way that it remains able to maintain its schedule; or*
- b. *is running late only due to causes within the network but only where the root cause is outside the rail operating company's control; or*
- c. *is running regardless of previous delays, within tolerance threshold; services include all committed and scheduled capacity (excluding ad hoc services).*

For this purpose tolerance is to be 15 minutes (unless otherwise agreed).

The ARTC reporting framework provides a more comprehensive measure of the overall reliability performance of the network. It is commonly accepted that the 'on time' performance is a key measure in the delivery of the DTP and consequently the total daily coal tonnages. Each access holder should be made aware of their performance and how it impacts on the network's train path consumption and the achievement of the DTP via regular performance reporting. Addressing the repeated failure to meet 'on-time' performance can be the first step in improving overall network performance and efficiency leading to a higher percentage of daily train path consumption.

3.2.12 Observations

The NBB draft system rules are not sufficiently transparent for access holders, auditors and the Authority to understand the capacity related information²⁶ as:

- The MTP process, as proposed by Aurizon Network, does not identify all system traffic, including cross system traffic which will reduce NBB system capacity. This is a known deficiency in the MTP process, in the view of both the access holders and the Authority²⁷, which will directly impact the ability of Aurizon Network to meet its contractual requirements.
- The true level of required and latent capacity in NBB is not able to be determined by analysing the MTP and then adjusting for the reduction in system capacity that is contained in the CACS.
- There is a significant lack of transparency in how the reductions in NBB capacity that are identified in the CAAC are actually undertaken, in particular:
 - There is no assessment of how the CAAC is actually delivered;
 - There is no indication of how changes to the CAAC over time deliver cost or benefits to either Aurizon Network or to access holders;
 - The NBB system rules do not contain a mechanism for dealing with changes in capacity;
 - How the port shipping demand profile²⁸ (21 day port rail plan) influences system capacity and Aurizon Network's Intermediate Train Plan; and
 - The decision making processes for the reductions in NBB capacity identified by the CAAC are not clearly articulated.

3.2.13 Recommendations

Indec recommends that consideration should be given to the implementation of the following changes:

- Indec supports Asciano's view that the reductions in each access holders' TSE allocation that are lost due to changes in the three week "lockdown" period of their four week pathing availability plan should be considered as Aurizon Network cancellations. Such an arrangement will provide sanctions to Aurizon Network for any cancellations and incentivise Aurizon Network to keep such occurrences to a minimum;
- Business rules for how the port shipping demand profile is to operate need to be developed and then agreed between the "affected parties"²⁹ and once finalised they will need to be incorporated into the system rules;

²⁶ Master Train Plan, Critical Asset Constraint Summaries, Four-Week Pathing Availability Plans and associated documents

²⁷ Queensland Competition Authority Capricornia Draft Decision, 24 April 2013 and Queensland Competition Authority Capricornia Final Decision, February 2014

²⁸ Each port operator is required to develop a minimum 21 day port rail plan detailing their raiiling requirements. This 21 day port rail plan may specify a level of priority for train services required to build or complete cargos. The port operator provides a copy of this demand profile to railway operators and Aurizon Network on a weekly basis, to assist in the train ordering and scheduling process.

²⁹ Affected parties are

- Affected Access Holders, Access Seekers and their customers (Affected Persons)
- Affected infrastructure providers (eg Port Operators, Adjoining Network Managers)
- Affected Infrastructure Service Providers
- Railway operators

- Indec suggests that the BER is verified against the requirements of the network management principles (2010 undertaking, schedule G, Appendix 3) and amended accordingly to ensure compliance. Once this has been completed, and following appropriate consultation, the BER should be incorporated into the NBB system rules;
- Aurizon Network demonstrate through the issue of a MTP the level of practical capacity available on the network with consideration of the applicable 'K' factor³⁰ for the network and other capacity restrictions;
- Aurizon Network demonstrate through the issue of a MTP the allocated capacity versus practical capacity; and
- Aurizon Network develop a more comprehensive performance report on train path consumption and network performance which uses the ARTC reporting framework as a guideline.

3.3 CONSISTENCY WITH STANDARD ACCESS AGREEMENTS

3.3.1 Assessment criteria

Assess whether the rules are consistent with the relevant terms in the Standard Access Agreements. For example do they:

- set out reasonable, well-defined coal supply chain objectives, as allowed for in the 2010 undertaking's network management principles (Schedule G, Appendix 3, Rule 8), to manage day-of-operation variability;
- apply consistently across all access holders and train operators; and
- provide flexibility to end users (under the alternative SAAs) to reallocate access rights between their nominated above-rail operators at short notice (see clause 2.3(f) of End User Access Agreement for the 2010 undertaking).

3.3.2 Analysis

Indec undertook a detailed review of the stakeholder submissions and of the Authority's Capricornia draft and final decisions to assess whether the NBB draft system rules are consistent with the relevant terms in the Standard Access Agreements (SAA). In particular, the analysis focused on understanding if the NBB draft system rules:

- set out reasonable, well-defined coal supply chain objectives to manage day-of-operation variability;
- are applied consistently across all access holders and train operators; and
- provide flexibility to end users to reallocate access rights between their nominated above-rail operators at short notice.

Indec is satisfied that the draft system rules are consistent with the undertaking³¹ including the SAA principles (Schedule E).

³⁰ K factor represents a comparison of the theoretical capacity (train paths available) of the rail system with the practical capacity (train numbers that can reliably be operated) expressed as a percentage.

³¹ QR Network's 2010 Access Undertaking Consolidated Version prepared as at December 2013 and End User Access Agreement Final Approved EUAA (Aug 13)

There is not however an explicit statement in the draft system rules to allow access holders to alter train services to reallocate their access rights between their nominated above-rail operators at short notice. This is not in accordance with the approved End User Access Agreement.³²

3.3.3 Management of day to day variability

In the Schedule G, Appendix 3, Rule 8 states that:

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 that this is consistent with meeting the coal supply objective(s) detailed in the system rules.

Indec's review of the draft system rules did not find that the rules establish a set of reasonable, well-defined coal supply chain objectives to manage day-of-operation variability. Section 8 of the draft system rules outlines an alteration decision making process without defining what objectives the process aims to achieve. The plan alterations rules process outlines the criterion that needs to be satisfied before a requested alteration can be granted however this is not linked to any objectives to demonstrate that the desired objectives will be achieved if the process is followed.

The NBB system rules would benefit from the development of a set of coal chain objectives to provide a framework or reference for decision making. The inclusion of a clearly defined set of objectives ensures all stakeholders understand the outcomes being sought and what drives the decision making process. It would provide transparency in relation to the degree of operational flexibility afforded within the context of the objectives set for the system and allow Aurizon Network to demonstrate that it is not favoring one access seeker over another.

Indec believes that the high level objective of the system rules is to meet the delivery of the TSEs as specified in the ITP and DTP. A subordinate objective would be to maximize available paths to improve the efficiency of the network. Indec notes that the Authority has decided on similar objectives in the Capricornia system rules review.

Indec suggests that the coal chain objectives should apply in the preparation of the ITP and the management of the DTP, including dealing with any emergency changes and operational delays.

- The inclusion of the recommended coal chain objectives will assist in the achievement of the following outcomes: maximising the system tonnage throughput;
- maximising the available paths;
- distributing available paths equitably; and
- minimising parcel build times.

3.3.4 Consistent application across access holders

The NBB draft system rules appear to provide for equitable treatment of all access holders and rail operators with Aurizon Network declaring:

In scheduling train services, Aurizon Network's primary responsibility is to maximise the system available pathing for the equitable distribution of TSEs...

³² See see clause 2.3(f) of End User Access Agreement Final Approved EUAA (Aug 13)

In order to achieve this, in developing the Intermediate Train Plan, Aurizon Network will allocate the available paths by applying the contested train path decision-making process in Appendix 2, Schedule G of the access undertaking³³

It should be noted that once a train service has been scheduled to a train path in the Intermediate Train Plan (that is, in the 48 Hour Schedule – see section 6.3 below) it is treated on equal terms with other scheduled train services for scheduling purposes.³⁴

In analysing the stakeholder submissions there was no specific commentary on the draft system rules consistency with the relevant terms in the SAA.

There were concerns raised about the Aurizon approach to scheduling which could potentially advantage mines that were closer to their port than those located in Western Queensland³⁵. However, these concerns are specifically related to potential inequitable treatment if additional capacity in the NBB system is available and not with the equitable treatment of contracted TSE of access holders. This issue is further discussed in Section 3.7.3.

3.3.5 Flexibility to end users

It is a requirement under the SAA to provide flexibility for short term scheduling such that end users that are under the alternative SAAs can re-appoint above-rail operators to undertake the relevant train order at short notice.

In the Authority's final decision on the Capricornia System Rules³⁶ it was stipulated that access holders could vary the allocation of their access rights provided they give Aurizon Network at least 56 hours' notice.

Indec has observed that the NBB system rules in Section 6.1 "Types of Requests to Alter Train Services"³⁷ does not explicitly include the ability of access holders to reallocate their access rights between their nominated above-rail operators at short notice.

3.3.6 Recommendations

Indec recommends that the following changes are given further consideration:

- The NBB system rules incorporate a set of coal chain objectives that establish a framework for decision making and the degree of flexibility available in the day to day operations of the system;
- Section 6.1 "Types of Requests to Alter Train Services" be amended to include that end users contracting under the alternative SAAs can vary the allocation of their access rights between their nominated above-rail operators (in accordance with the End User Access Agreement).
- This change should however be made under the system rules for changes to the Intermediate Train Plan³⁸ where:

³³ Draft NBB System Rules page 19

³⁴ Draft NBB System Rules page 20

³⁵ Anglo American Submission on Aurizon Network's Northern Bowen Basin System Rules, September 2013, page 5

³⁶ Queensland Competition Authority – Final Decision Capricornia System Rules, February 2014, Decision 3.7

³⁷ The four types of Request to Alter Train Services are:

- Additional Requested Services
- Cancelled Train Services
- Rescheduling Train Services (date or time)
- Diverted Train Services

- Any changes to the 72 Hour Schedule outside of the 48 Hour Schedule will not result in TSE consumption; and
- Should an access holder request changes to the 48 Hour Schedule, additional TSE consumption may result if another access holder was unable to use the train path cancelled.

3.4 WORKABILITY OF NBB DRAFT SYSTEM RULES

3.4.1 Assessment criteria

In addition to the matters assessed in the Sections 3.1 to 3.3 above, assess whether the draft NBB rules are workable for all stakeholders, including whether they:

- provide for cost-effective operations for supply chain participants including mines, ports, and above-rail operators; and
- promote the efficient operation of the coal supply chain, and ensure that the efficiency benefits more than offset the extra administrative costs Aurizon Network may incur in being more transparent about its train-scheduling and control decisions.

3.4.2 Analysis

Indec undertook a review of the stakeholder submissions and of the Authority's Capricornia draft and final decisions as to whether the NBB draft system rules are workable for all stakeholders. In particular, the analysis considered the following:

- efficient management of the system rules over time;
- provide for cost-effective operations; and
- promote the efficient operation of the coal supply chain.

3.4.3 Management of NBB system rules

The processes for the amendment of the NBB system rules drew consistent criticism from the stakeholders with the major concerns relation to Aurizon Network's ability to determine what changes will be made to the system rules, the process of consultation with no external oversight of the amendment process.

Under the draft system rules, with the exception of the annual review, Aurizon Network holds the decision making authority for the scope of any review of the NBB system rules with other stakeholders having limited opportunities to request a review.

Indec's view is that the proposed amendment process for the NBB system rules cannot be seen as equitable³⁹ to all parties involved. The amendment process restricts the submission on proposed changes to "Affected Person"⁴⁰ rather than Affected Parties⁴¹ despite affected parties potentially being impacted.

As affected parties cannot make a submission on a proposed change to system rules, this could result in an outcome where Aurizon Network does not adequately consider the impacts of any system rule changes to affected infrastructure providers (port operators and adjoining network operators), affected infrastructure service providers and railway operators. This is despite the affected parties being directly impacted if the proposed changes in system rules do not 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.

3.4.4 Stakeholder views

In terms of amendments to the system rules Vale in their submission identified that:

*...the lack of clarity and definition about what form and timing of consultation will take place.*⁴²

Vale believes that too much of the control over the NBB System Rules is left to Aurizon Network without external oversight or clear governance controls of how the consultation with stakeholders will be undertaken.

Asciano's submission identified that Aurizon Network would have the ability to unilaterally amend the NBB System Rules⁴³ without oversight from the Authority.

Asciano's view is directly supported by Glencore and both Peabody and Anglo American in their submissions⁴⁴ identify the consultation process for amending the NBB system rules to be inequitable to stakeholders.

As highlighted below, BMA raised concerns in its submission that the current and future iterations of the NBB system rules could be used to undermine the existing relationships between producers and their service providers.

*It is imperative that CQCN coal chain entities (producers and service providers) are not able to use this system rules process to amend, change and improve contractual obligations and accountabilities which currently exist between producers and their service providers.*⁴⁵

³⁹ 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;

⁴⁰ Affected Persons (Affected Access Holders, Access Seekers and their customers)

⁴¹ Affected Parties are:

- Affected Access Holders, Access Seekers and their customers(Affected Persons)
- Affected infrastructure providers (eg Port Operators, Adjoining Network Managers)
- Affected Infrastructure Service Providers
- Railway operators

⁴² Vale Submission to the QCA Review of the Aurizon Network Draft Northern Basin System Rules, 26 September 2013 page 1

⁴³ Asciano Submission to the QCA Review of the Aurizon Network Draft Northern Basin System Rules, September 2013, page 7

⁴⁴ Anglo American Submission on Aurizon Network's Northern Bowen Basin System Rules, September 2013, page 6 Section 7, Peabody Submission to the QCA Review of the Aurizon Network Draft Northern Bowen Basin System Rules, 26 September 2013, page 2 Section 3.1

⁴⁵ BMA Submission to the QCA Review of the Aurizon Network Draft Northern Bowen Basin System Rules, undated, page 2

The Queensland Resource Council (QRC), in its submission on Network Management Principles and system rules for UT4⁴⁶ identifies that there should be thresholds of changes in system capacity that result in a review and amendment of the system rules. The relevant comments are reproduced below:

The QRC supports the inclusion of a requirement for any amendments to the system rules to be approved by the QCA. This is consistent with the requirement for initial system rules to be approved by the QCA.

The requirement for QCA approval will also ensure that any submissions made by an affected person are adequately considered and that the proposed amendments operate equitably among access seekers and access holders.

The QRC considers there should be an obligation, rather than a mere discretion, for Aurizon Network to review and amend the system rules where:

- *system capacity increases by greater than 30%; or*
- *an expansion is required to increase system capacity by greater than 30%; or*
- *60% of access holders in a coal system formally request such a review.*

The QRC considers that in such circumstances, a review of the system rules will be necessary to ensure the system rules continue to adequately govern the changes to train services.

3.4.5 Cost effective operations

The submissions made by stakeholders did not specifically identify how the costs of their individual operations would be affected by the NBB systems rules. The stakeholder interviews did not raise any issues in this regard. It is Indec's view that the commercial impacts of the draft system rules have not been fully quantified by stakeholders. The submissions made by the stakeholders and the issues raised would imply that the system rules have the potential to influence the costs and revenues of the system users.

During this review, which included Aurizon Network documentation and interviews with Aurizon Network staff, Indec has not been presented with any information of the administrative costs that Aurizon Network may incur in being more transparent about its train-scheduling and control decisions. Indec did not specifically request that such information be provided as it believed the incremental costs to Aurizon Network would not be material as the information systems and reporting processes are currently in place for this information to be provided.

As outlined in Section 3.1.7, transparency provides stakeholders with the information required to make informed decisions to improve the effectiveness and efficiency of the network to maximise the network throughput. Greater transparency of network information and operational data provides system users with visibility on the:

- basis for the quantification of the network capacity;
- impact of track possessions for planned maintenance and how they are managed;
- effective use of the network;
- delivery of the track possessions to the plan; and

⁴⁶ QRC Main Submission Section 2.6 P61/62

- future investments needs.

Indec did not complete a detailed assessment of the cost-effectiveness of achieving greater levels of transparency. Assuming that the additional costs on Aurizon Network to provide additional information from its existing information and reporting systems is minimal, the achievement of greater transparency is likely to involve greater benefits to the users than the costs to Aurizon Network. A more detailed assessment would be required to verify this assumption and provide a quantitative estimate of the expected benefits and costs.

3.4.6 Promote efficient coal supply chain

There is a wide range of stakeholder views on whether or not the NBB draft system rules will promote the efficient operation of the coal supply chain.

Indec believes that the transparency of the MTP would promote an efficient coal supply chain as it would establish a framework to measure the system's capacity and utilisation. This could also be used to calculate the capacity utilised due to maintenance possessions on the network and other reasons for lost capacity.

Asciano

As highlighted below, Asciano believes that the NBB planning processes are narrowly focused and need to consider the entire supply chain.

The planning needs to be broadened to include mine, port and rollingstock considerations and the focus of the planning process should be maximising the volume of coal moved⁴⁷.

BMA

As highlighted below, BMA strongly support the draft system rules particularly the adherence to the timeframes, alignment with the ports planning and the predictability it provides to its own planning processes.

We support AN's disciplined monthly and weekly' train planning processes. We support alignment of this planning process to the port shipping demand profile and operational capabilities at the ports as well as coal availability at the mines.

We manage our BMAACC operations to similarly deliver a stable internal planning environment within the quarterly, monthly, weekly and daily time horizons. By replicating this planning process internally within BMAACC, we are able to maximise the utilisation of our scheduled train paths, minimise variation across our portfolio of mines, maximise our operational capability and deliver throughput to meet our production forecasts.⁴⁸

⁴⁷ Asciano Submission to the QCA Review of the Aurizon Network Draft Northern Bowen Basin System Rules, September 2013, page 7

⁴⁸ BMA Submission to the QCA Review of the Aurizon Network Draft Northern Bowen Basin System Rules, undated, page 5

Anglo American

Anglo American has raised significant concerns that the supply chain through DBCT will be negatively impacted as a result of the draft system rules.

Anglo American is broadly concerned with the scheduling process outlined in section 6 of the NBB Rules. In particular, Anglo American is troubled by the inequitable treatment in the allocation and planning of services between terminals and the ability to use TSE, leading to further degradation of DBCT's achievable throughput capacity.....

...Anglo American understands that this represents a significant departure from the prior scheduling arrangements which allowed for a much shorter planning horizon for the Goonyella system, usually between 48 and 72 hours.⁴⁹

3.4.7 Recommendations

Indec recommends that further deliberation be given to implementing the following arrangements to provide stakeholders with the ability to request a review of NBB system rules:

- The scope of the modification process for the NBB system rules is expanded to include affected parties in the consultation process to ensure that they are informed of any proposed changes;
- Aurizon Network be required to provide a copy of any submissions it has received to amend the system rules to all affected parties;
- The Authority reserves the right to be able to direct Aurizon Network to undertake a review of the NBB system rules as required by the Authority; and
- Any disputes of the modifications to the system rules can be referred to the QCA by an affected person where they are dissatisfied with the Aurizon Network response.

Indec understands the Authority may prefer to address these recommendations as part of its review of the 2013 draft access undertaking, rather than through the draft NBB rules.

Indec also believes that changes in the capacity of the NBB system should also consider amendment of the planning for the NBB and the MTP, see Section 3.5.3.

Indec believes that further consideration should be provided to the two key elements to determine how the NBB's operational performance can be more efficiently measured:

- Fully measure DTP in both planning and achievement of all TSEs, see Section 3.1.8; and
- Measurement of the performance of how the CACS is delivered, identification of how any variance in CACS in the three week lock down period is managed, where this led to variances in TSEs, and how the TSE gains from any variance have been allocated, see Section 3.5.4 and 3.5.5.

⁴⁹ Anglo American Submission on Aurizon Network's Northern Bowen Basin System Rules, September 2013, page 5

3.5 RECOMMENDED AMENDMENTS TO NBB DRAFT SYSTEM RULES

3.5.1 Assessment criteria

Advise the Authority on amendments to the NBB draft system rules, in respect to the issues considered under the Terms of Reference, that would provide for a:

- reasonable and feasible approach to recording, reporting and auditing information required for the transparent, equitable and efficient operation of the coal supply chains; and
- suitable way to achieve 'equitable operation of the system rules' in the context of different access holders' train service entitlements.

3.5.2 Analysis

The key issue to be addressed is "What is the capacity of the NBB system and is that capacity allocated in a transparent, equitable and efficient manner that meets the needs of access holders?".

Indec undertook a detailed review of the stakeholder submissions and of the Authority's Capricornia final decision and applied its industry experience to assist in determining:

- What information is required to be provided for the transparent, equitable and efficient operation of the coal supply chains in the NBB system; and
- Assess the feasibility and reasonableness of that information being provided under the NBB system rules.

Indec believes that the suggested recommendations to the NBB draft system rules achieve a fair balance between keeping interested parties informed of developments on a timely basis against the administration imposts on Aurizon Network.

3.5.3 Update of master train plan

The capacity of the NBB system is required to be provided by the MTP processes, however as identified in the commentary in Section 3.2 there is significant concern as to the level of transparency, equity and efficiency with the NBB system rules.

The Authority has determined in its final decision on the Capricornia System Rules that Aurizon Network provides an MTP that shows capacity, how its contractual TSE obligations fit into that capacity, and demonstrate to access holders that it can meet all of those obligations. There is no reason to believe that the Authority should not require Aurizon Network to do likewise in the NBB system.

A key requirement for a transparent, equitable and efficient operation of the NBB coal supply chains is that the MTP is kept up to date and that stakeholders are consulted when changes of significance to the MTP are identified.

Indec recommend that the following key changes are considered:

- All stakeholders are consulted when NBB system capacity, as identified in the MTP changes by more than +/- 5%; and
- Relevant stakeholders are consulted when an individual segment on the NBB system, see Table 1, has its annual raiiling forecast change by more than 10% from the expected raiiling forecast.

Table 1- Aurizon Network – Coal Railing Forecast by Segment (Mt)⁵⁰

Financial year	2014f	2015f	2016f	2017f
Aurizon Network Segment				
Newlands	35.4	41.2	44.1	47.7
Goonyella	97.3	106.4	112.0	116.9
Blackwater	54.4	60.9	67.4	73.4
Moura	12.5	13.6	13.0	14.1
Total	199.6	222.2	236.5	252.1

In addition, the following amendments are considered for further deliberations:

- Aurizon Network to retain all written records during any consultation with affected parties;
- Aurizon Network to provide an annual report to affected parties of the changes in the MTP that covers the:
 - cause of the changes in the MTP;
 - impact on past NBB capacity detailed on a monthly basis; and
 - forward impact on NBB capacity for the next 12 months detailed on a monthly basis.

Indec notes that the Authority may wish to address these recommendations and/or proposed amendments in the review of the 2013 draft access undertaking, rather than the NBB rules.

3.5.4 Critical asset alignment calendar

The CAAC is a critical process for establishing the medium term capacity of the NBB and for access holders and infrastructure service providers to be informed of the NBB system supply chain constraints and to plan for how the constraints will affect their supply chain operations.

Aurizon Network coordinates monthly meetings with supply chain stakeholders, to ensure the information in the CAAC is kept up to date and is aligned, where practical, with known supply chain demand. Indec has suggested a number of amendments to further improve this process and to increase the level of transparency and equitable outcomes to all stakeholders.

Indec recommends that consideration is given to implementing the following changes:

- Aurizon Network to retain all written records during the monthly consultation with affected parties; and
- Aurizon Network to provide a six monthly report to affected parties of the changes in the CAAC that covers:
 - the cause of the changes in the CAAC;

⁵⁰ Central Queensland Coal Railing Forecast – Energy Economics July 2013, Table 8 P26

- the planned versus actual completion of the CAAC detailed on a monthly basis; and
- revised CAAC for the next 12 months detailed on a monthly basis.

3.5.5 Efficiency of four week pathing plan

The four week pathing plan is a critical constraint on the operations of access holders with Aurizon Network setting out the locked down possessions on the first three of the four weekly periods. This issue was further discussed in Section 0.

Following on from the issues considered earlier in the report, the key changes proposed by Indec for further deliberation include:

- Aurizon Network to retain all written records relating to changes in the planned possessions in any of the locked down periods; and
- Aurizon Network to provide a six monthly report to affected parties of the changes in locked down possessions that covers:
 - the cause of the change to the locked down possession;
 - the increase or decrease in rail capacity from the change to the locked down possession; and
 - how any increase or decrease in rail capacity from the change to the locked down possession was allocated and used by an access holder.

Indec notes that the Authority may wish to address these key changes (related to reporting) as part of the review of the 2013 draft access undertaking, rather than the NBB rules themselves.

3.5.6 Out of course running and cancellation

The current process for the allocation of responsibility for out of course running and cancellations relies on the inputs from train controllers into the Vizirail system and a forum involving the Shift Business Manager from Aurizon Network (chair) and access holders on a 4 hourly basis.

Indec recommends that consideration be given to amending the decision making process for the out of course running and cancellations to include:

- The development of a formal process within Aurizon Network whereby train control decisions relating to delays arising from out of course running and cancellations is validated by Control Centre senior management;
- Publication of responsibility outcomes to affected parties; and
- Weekly reporting of performance against planned distributed to all stakeholders including producers.

3.6 RECOMMENDED AMENDMENTS TO 2013 DRAFT ACCESS UNDERTAKING NETWORK MANAGEMENT PRINCIPLES

3.6.1 Assessment criteria

Advise the Authority on potential amendments to the 2013 draft access undertaking's network management principles (Schedule H) that would promote the transparent, efficient and equitable operation of the system rules. The consultant will have particular regard to the:

- contested-train path decision-making matrix, which is used to produce the intermediate train plan (clause 8 of schedule H);
- rules for amending the DTP (clause 5.4 of schedule H); and
- rules underpinning the traffic-management decision-making matrix (clauses 7.4 and 9 of schedule H).

3.6.2 Analysis

Indec reviewed the 2013 draft access undertaking's network management principles (Schedule H) and the NBB draft system rules. Indec also considered the stakeholder submissions received and the issues raised during the stakeholder meetings and applied its industry and commercial experience.

3.6.3 Contested train path decision making process

Clause 8.3 (ii) stipulates that 'where the relevant access holders agree amongst themselves who should be allocated the contested train path, the contested train path will be allocated as agreed by the access holders'.

To enable this, it is suggested that consideration be given to amending the clause or system rules (or both) to:

- Facilitate the mechanism to enable this discussion to occur in a timely manner; and
- Provide transparency for access holders to have visibility of available surplus train paths in a form that indicates the time/distance (location) relationship of the train services and other activities (i.e. planned possessions) on the rail infrastructure.

3.6.4 Daily train plan

As outlined in Section 3.3.5, Indec recommends that Section 5.3 and 5.4 be amended to include that end users contracting under the alternative SAAs can vary the allocation of their access rights between their nominated above-rail operators, provided it is consistent with the End User Access Agreement.

3.6.5 Traffic management decision making matrix

Indec has not raised any issues with the traffic management decision making matrix.

3.7 QUALITATIVE ASSESSMENT OF THE IMPACTS OF THE NBB SYSTEM RULES

3.7.1 Assessment criteria

Qualitatively assess whether (and how) the rules:

- affect the relative commercial and operational positions of users (or groups of users) of the NBB system's different ports, having regard to the operating modes of the system's supply chains;
- reduce or increase capacity for:
 - train services destined for users of either or both of the Goonyella coal system's port terminals (i.e. DBCT and HPCT), and for users of APCT; and
 - maintenance and construction activities (i.e. planned possessions); and
- adequately address the impacts of cross-system traffic – e.g. train services entering the NBB system from Capricornia (and possibly the Galilee Basin in the future).

3.7.2 Analysis

Indec's analysis included reviewing the NBB system rules and stakeholder submissions to identify if the system rules raise any issues in relation to:

- the relative commercial and operational positions of users;
- reduce or increase capacity for train services based on destination port terminal;
- reduce or increase capacity for maintenance and construction activities; and
- adequately address the impacts of cross-system traffic.

3.7.3 Commercial and operational position of users

The stakeholder submissions and follow up meetings identified a number of issues relating to commercial and operational positions with issues raised in relation to:

- destination port operating mode, which is covered in section 3.7.4;
- cross system traffic, which is covered in section 3.7.6; and
- location of mine, which is discussed in section 3.7.7.

3.7.4 Capacity impacts based on port destination

A stakeholder suggested during its interview that there needs to be a separation of port mode to better suit the operations of the network to differentiate between stockpile and cargo assembly port modes. The stakeholder suggested that such an approach would assist in the greater coordination of the coal value chain to maximise economic outcomes.

Anglo American suggests that the priority of scheduling should be determined by the destination port operating mode to give priority to cargo assembly port modes. Anglo American believes that such an approach would ensure the efficient use of the rail infrastructure and maximise network capacity.

For complex terminals such as DBCT, planning occurs on a long term basis, however, lockdown of train services must be as close to the actual day of operations as possible in order to maintain stability in the daily plan; eg, a 48 hour rolling basis allowing flexibility.

Anglo American is strongly of the view that priority scheduling should rest with end users who require it most in order to ensure the efficient use of the Central Queensland Coal Network and work to achieve raiiling of full contracted capacity, while maximising network capacity at the same time. This would mean that end users requiring immediate shipping of their coal should receive priority over end users who are subject to a stockpile system and whose TSEs are therefore not drastically affected by rail delays.⁵¹

Aurizon (above rail) raised some concerns during the stakeholder meetings about the interfacing frameworks between the ports and rail which created problems in delivering effective train planning. Aurizon (above rail) commented that the port shipping forecasts at Dalrymple Bay Coal Terminal (DBCT) was not always consistent, which impacts on the rail ordering and path delivery mechanisms. These comments indicate that the planning and scheduling interfaces between rail and DBCT may have some opportunities for improvement to deliver more efficient use of the rail infrastructure.

3.7.5 Capacity impacts for maintenance and construction activities

Stakeholders did not raise any significant issues in relation to the capacity impacts arising from maintenance and construction activities. A stakeholder did make the comment during its meeting that it found the CACS a useful document. Other stakeholders raised concerns about the level of information disclosure revolving around maintenance and construction activities which was discussed in section 3.2.7.

3.7.6 Impact of cross system traffic

Anglo American has raised some concerns relating to the impact of cross system traffic and the potential to degrade the capacity available to existing users. These concerns are reproduced:

Anglo American understands that the current submission of the NBB Rules has no regard to the impact that cross system traffic might have on the available TSEs and scheduling of a particular system. In particular, Anglo American notes that since recent connections, cross system traffic has the potential to significantly degrade the capacity available to existing users of the Goonyella system, and this is not reflected or considered by the NBB Rules.

Anglo American submits that section 5.3.4 of the NBB Rules should be expanded in order to deal with the issues raised by degraded capacity due to cross system traffic. Where there is potential for congestion at a particular loadout for cross system trains, trains must be planned and scheduled into the loadout as per the mine's determination of which service is to receive priority.

This is opposed to the possibility of releasing trains on an 'on arrival' basis (assuming that is what the reference in the NBB Rules means). The mine making the determination should be required to consider (among other things):

- *production continuity;*
- *stockpiling capacity;*
- *coal availability; and*
- *shipping order of arrival.*

⁵¹ Anglo American Submission on Aurizon Network's Northern Bowen Basin System Rules, September 2013, page 5

The mine's determination is important for both the management of shipping demurrage and for avoiding production outages resulting from becoming 'stock bound'.⁵²

Anglo American also submitted that foundation users of the Goonyella coal system should have their train services scheduled before GAPE users' train services.

Anglo American believes that in recognition of earlier contracting of expansion capacity compared to GAPE, a rule should be instituted (the 'status quo' rule) that requires the scheduling of Goonyella services for [Hay Point Coal Terminal] and DBCT in the ITP and DTP before GAPE services are scheduled. This concept should be incorporated into the existing section 5.3.5 of the NBB Rules and will ensure that the foundation End Users of the Goonyella system, DBCT and [Hay Point Coal Terminal] do not suffer from expansion compression resulting from the GAPE expansion scope or operations.⁵³

Anglo American provided proposed drafting to the Authority and Indec that it considered would give effect to the 'status quo' rule.

3.7.7 Location of mine

Anglo American raised an issue that the draft system rules may potentially bias the allocation of additional capacity to short haul mines at the expense of long haul mines.

Where additional capacity is available, it can be meted out to users as the relevant operator or Aurizon Network sees fit. As it is much simpler to lay down short run train paths from mines close to the coast, Anglo American is concerned that mines that require long haulage and greater coordination will rarely receive an equal share of the benefit of additional capacity, particularly with a potential objective to only maximise system throughput (rather than deliver contracted capacity).

Further, Anglo American notes that when coupled with the inflexibility of Aurizon Network's 1/52nd weekly TSE calculations (discussed at paragraph 2), long haul mines will feel the full effect of their geographical disadvantage. Where system loss or decreased capacity events occur, it will be far simpler for short haul mines to pick up cancellations, diversions, additional resources and ad hoc paths and as such, the ability for short haul mines to recover lost TSEs will be much greater than for long haul mines.⁵⁴

Anglo American has suggested that the NBB system rules include principles to allow for the equitable distribution of extra capacity between end user which does not discriminate based on location and unintentionally give particular users a competitive advantage.

Anglo American submits that principles should be included in the NBB Rules allowing for equitable distribution of extra capacity between end users to ensure that mines requiring greater transport alignment are not unfairly disadvantaged or discriminated against because of their location. Additionally generated capacity should be employed for the benefit of the whole system and should not unwittingly give particular end users a competitive advantage.

⁵² Anglo American Submission on Aurizon Network's Northern Bowen Basin System Rules, September 2013, page 4

⁵³ *ibid*

⁵⁴ Anglo American Submission on Aurizon Network's Northern Bowen Basin System Rules, September 2013, page 5

Where system loss or decreased capacity events occur, it will be far simpler for short haul mines to pick up cancellations, diversions, additional resources and ad hoc paths and as such, the ability for short haul mines to recover lost TSEs will be much greater than for long haul mines. As noted above, this places long haul mines at a competitive disadvantage due to the operation of the regulation (through the NBB Rules) and undermines the purpose of regulation in the first place.⁵⁵

At a stakeholder meeting a system user indicated its preference that the system rules should be an operational document with no commercial drivers.

3.7.8 Observations

Indec's qualitative assessment of the impacts of the NBB draft system rules has identified stakeholder concerns relating to the system rules not considering the destination port operating mode, impacts associated with cross system traffic and potential biases arising from the location of mine. Stakeholders have expressed their concerns relating to these issues in their formal submissions and during the interviews.

The efficient use of the coal supply chain network is dependent on optimising the mine head stockpile with the available rail network capacity within the available port stockpile. The optimisation of the network capacity can only occur within these parameters. Different end users will have differing views of what an optimal network capacity should look like and the real issue is how to establish the system rules to optimise the network's performance for all users and the total investment made by all parties.

It is a fact of life that the ability to provide additional paths at short notice favours short haul over long haul due to the logistics involved and this should not be considered as a monopolistic approach. While Indec has not considered this issue in depth, Indec has identified the following suggestions for further consideration to improve transparency and equity which may address stakeholder concerns to some extent.

In order to enhance transparency and equity over the allocation of additional capacity, Aurizon Network could advertise the availability of additional paths based on a queuing system. Each end user (regardless if short-haul or long-haul users) would have equal opportunity to utilise any additional paths and once the opportunity is offered to an end user, whether the path is taken or not, that end user then drops to the bottom of the list for the next advertised additional train path. Indec is unsure if this would actually improve the opportunities for long haul users however it should improve transparency and the perception of equity amongst end users.

The incidence of filling additional paths is not quantified and was not within the scope of this engagement. Therefore the relevance in the total capacity of the system of the short term response by end users to fill any gap in utilisation is not understood. The overall approach to this issue perhaps would be to minimise the short term loss of utilisation of the rail network by improved levels of reliability of supply chain and improved planning.

⁵⁵ *ibid*

The scope of the review did not require Indec to undertake quantitative analysis to substantiate or otherwise the claims raised by the stakeholders and their potential impacts. The impacts raised by stakeholders have the potential to influence both the equitable and efficient operation of the NBB system and Indec recommends that dynamic system capacity modeling is completed to better understand this issue.

It would appear that a number of stakeholders have raised issues that warrant further investigation.

For example, Indec recognises that Anglo American has raised a number of equity-oriented arguments in terms of how Aurizon Network should schedule train services when preparing the Intermediate Train Plan. One of those arguments was that Aurizon Network should schedule Goonyella train services destined for DBCT and Hay Point Coal Terminal before GAPE users' train services. Anglo American substantiates this argument by saying that cross-system train services, defined as train services entering the Newlands system from Goonyella via GAPE, have compromised capacity available for Goonyella mines, and that these mines should not be adversely affected. Indec also notes that Rio Tinto Coal Australia and Anglo American have stated that preference for train services using DBCT may be warranted over other ports, given its cargo-assembly operating mode precludes it from having the flexibility that Hay Point Coal Terminal and Abbot Point Coal Terminal have because of larger stockpile capacity.

If the Authority accepts any of these arguments, Indec would like draw attention to clause c (i) of Schedule G, Appendix 2 in the 2010 undertaking, which would be one avenue to give effect to the relevant stakeholders' positions. This clause allows system rules to identify any train services or unloading facilities that can be prioritised in Aurizon Network's process for allocating a contested train path, when preparing the Intermediate Train Plan. Another avenue to consider is Rule 8 of Appendix 3, Schedule G of the 2010 undertaking, which allows Aurizon Network to have regard for coal supply objectives specified in the system rules for deciding how to prioritise train services in the day of operation.

Further analysis (including dynamic system capacity modeling) would be needed to validate stakeholders' claims, to assess the potential impacts and consider both the costs and benefits of any changes that could improve the equitable operation of the system rules and promote the efficient operation of the coal supply chain.

3.7.9 Recommendations

Indec recommends that consideration is given to completing further analysis including dynamic system capacity modelling to:

- Assess the impacts of cross system traffic on all users including the impacts of the introduction of additional traffic;
- Assess if potential biases against long haul mines occurs from the allocation of additional capacity and if biases are found to exist, what changes are required to remove the biases and what the operational impacts on all users are; and
- Consider the introduction of a priority train plan which considers the port destination operating mode and the criticality of on-time running. The potential impacts on all users would need to be considered as would the costs of introducing and managing such a system.

Indec recommends that the NBB system rules need to take into consideration the effect on substantial increases in traffic and throughput levels and step tranche increases in available capacity. It is recommended that prior to the connection of adjoining infrastructure to the NBB system, such a connection triggers an automatic review of the NBB system rules. This could be addressed through the Authority's review of the provisions for amending the system rules in Aurizon Network's 2013 draft access undertaking.

APPENDIX A – TERMS OF REFERENCE

Terms of Reference

Aurizon Network's draft Northern Bowen Basin System Rules

Assessment of impact on access holders, access seekers and their customers

20 September 2013

1. Project Background

The Queensland Competition Authority (the Authority) is an independent statutory body responsible for assisting with implementing competition policy in Queensland. Its functions are set out in the *Queensland Competition Authority Act 1997* (QCA Act). The Authority regulates Queensland's declared rail infrastructure, which includes the below-rail assets owned by Aurizon Holdings Ltd, through its subsidiary Aurizon Network Pty Ltd.

On 1 October 2010, the Authority approved the 2010 access undertaking for Aurizon Network. The 2010 undertaking regulates the activities of Aurizon Network as the monopoly owner of the below-rail infrastructure in central Queensland that is used to transport coal between the region's mines and ports. Access holders to Aurizon Network's rail infrastructure can either be train operators or coal miners, and the 2010 undertaking includes standard access agreements (SAAs) that can be used by these parties.

The 2010 undertaking sets out the principles for the pricing of access, and for the allocation and development of new capacity. It includes network management principles (in Schedule G, which can be found here: <http://www.qca.org.au/files/R-2010-DAU-QR-Undertaking-QRN2010DAU-0511.pdf>), which specify procedures for scheduling train services on the network, and the rules for coordinating train movements across the network on the day of operation.

System Rules

The 2010 undertaking provides for Aurizon Network to develop system rules, which elaborate on the network management principles to suit the priorities of each coal system's mines and ports. The 2010 undertaking requires Aurizon Network, when making and amending system rules, to have regard to:

- (a) the equitable operation of the system rules across access holders and access seekers (should they become access holders) and their customers; and
- (b) the terms of access agreements (clause 7.1(c)).

On 5 August 2013, Aurizon Network submitted draft system rules for the Northern Bowen Basin (NBB), which comprises the Goonyella and Newlands coal systems, that are connected by the Goonyella Abbot Point Expansion (GAPE) system. A map of the various coal systems can be downloaded at: <http://www.qca.org.au/files/R-AurizonY-Submissions-DAU13-513.pdf>.

While the draft NBB system rules are being considered under the 2010 undertaking, the Authority is also reviewing Aurizon Network's 2013 draft access undertaking, which includes a different set of network management principles (Schedule H which can be found here:

Queensland Competition Authority Terms of Reference <http://www.qca.org.au/files/R-Aurizon-QR2013DAU-Vol1-0513.pdf>) to those in the 2010 undertaking. This will affect the operation of the NBB system rules in the future.

On 24 April 2013, the Authority made a draft decision to reject Aurizon Network's draft Capricornia (comprising Blackwater and Moura) system rules, which are a separate proposal to the NBB rules, but raise similar issues. The Authority considered the Capricornia system rules needed to be transparent, equitable, and consistent with the network management principles and terms in the SAAs. This draft decision can be found at: <http://www.qca.org.au/files/R-QCA-DraftDec-PropSysRules-0413.pdf>.

2. Purpose of Consultancy

The purpose of the consultancy is to provide technical advice to assist the Authority in applying the assessment criteria for Aurizon Network's draft NBB system rules. In doing so, the consultant will perform the following tasks:

- (a) assess whether the draft NBB system rules are consistent with the 2010 undertaking's (<http://www.qca.org.au/files/R-QCA-PropStdAccAgr-FinalApp-2010Undertake-0813.pdf>) requirements, including:
 - (i) the requirements for providing capacity-related information and scheduling trains in the network management principles (clause 7.1(a) and Schedule G);
 - (ii) access holders' train service entitlements (see clause 7.2(a) for a description of the constraints affecting these); and
 - (iii) the requirement for equitable treatment of different access holders (and, if access holders are train operators, their customers) (clause 7.1(c)(i));
- (b) assess, having regard to stakeholder submissions on the draft NBB rules (available at <http://www.qca.org.au/rail/2010-DAUamend/PropSysRules/NBB.php> after 30 September 2013) and to the Authority's Capricornia draft decision, whether the rules are sufficiently transparent for access holders, auditors and the Authority to:
 - (i) understand the capacity-related information (master train plan, critical asset constraint summaries, four-week pathing availability plans and associated documents) provided by Aurizon Network;
 - (ii) verify that Aurizon Network's proposed rules for train-control decisions in the day of operation are:
 1. consistent with the traffic-management decision-making matrix in the network management principles (2010 undertaking, schedule G, Appendix 3); and
 2. reasonable, taking into account the objectives of safe network operations, non-discrimination between access holders, train operators, customers and terminals, maximising throughput, and minimising transit times;
 - (iii) validate how train path consumption is recorded, and whether it is being done so in a non-discriminatory manner, and how it affects access holders' future train service entitlements;

- (c) assess whether the rules are consistent with the relevant terms in the Standard Access Agreements (SAAs, can be found here: <http://www.qca.org.au/files/R-2010-DAU-QR-Schedules-Operator-QRN2010DAU-0910.pdf>), e.g. do they:
- (i) set out reasonable, well-defined coal supply chain objectives, as allowed for in the 2010 undertaking's network management principles (Schedule G, Appendix 3, Rule 8), to manage day-of-operation variability;
 - (ii) apply consistently across all access holders and train operators; and
 - (iii) provide flexibility to end users (under the alternative SAAs) to reallocate access rights between their nominated above-rail operators at short notice (see clause 2.3(f) of End User Access Agreement for the 2010 undertaking – <http://www.qca.org.au/files/R-QCA-PropStdAccAgr-FinalApp-EUAA-0813.pdf>).
- (d) in addition to the matters discussed in (a) to (c) above, assess whether the draft NBB rules are workable for all stakeholders, including whether they:
- (i) provide for cost-effective operations for supply chain participants including mines, ports, and above-rail operators; and
 - (ii) promote the efficient operation of the coal supply chain, and ensure that the efficiency benefits more than offset the extra administrative costs Aurizon Network may incur in being more transparent about its train-scheduling and control decisions.
- (e) advise the Authority on amendments to the draft NBB rules, in respect of (a) to (d) above, that would provide for a:
- (i) reasonable and feasible approach to recording, reporting and auditing information required for the transparent, equitable and efficient operation of the coal supply chains; and
 - (ii) suitable way to achieve 'equitable operation of the system rules' in the context of different access holders' train service entitlements;
- (f) advise the Authority on potential amendments to the 2013 draft access undertaking's network management principles (Schedule H in <http://www.qca.org.au/files/R-Aurizon-QR2013DAU-Vol1-0513.pdf>) that would promote the transparent, efficient and equitable operation of the system rules. The consultant will have particular regard to the:
- (i) contested-train path decision-making matrix, which is used to produce the intermediate train plan (clause 8 of schedule H);
 - (ii) rules for amending the daily train plan (clause 5.4 of schedule H); and
 - (iii) rules underpinning the traffic-management decision-making matrix (clauses 7.4 and 9 of schedule H).

- (g) qualitatively assess whether (and how) the rules:
 - (i) affect the relative commercial and operational positions of users (or groups of users) of the NBB system's different ports⁵⁶, having regard to the operating modes of the system's supply chains;
 - (ii) reduce or increase capacity for:
 1. train services destined for users of either or both of the Goonyella coal system's port terminals (i.e. DBCT and HPCT), and for users of APCT; and
 2. maintenance and construction activities (i.e. planned possessions); and
 - (iii) adequately address the impacts of cross-system traffic – e.g. train services entering the NBB system from Capricornia (and possibly the Galilee Basin in the future); and
- (h) if required, quantitatively assess the capacity impacts (through dynamic capacity modelling) of the rules on various users, groups of users, and ports in the NBB system, as identified in (g)(i)-(iii) above.

The Authority will require a report setting out the analysis and advice regarding (a) to (g), and may require the consultant provide dynamic capacity modelling services as set out in task (h). If task (h) is required, the Authority may either request the consultant to review any capacity modelling supplied by stakeholders, or undertake independent capacity modelling.

The assessment will be used by the Authority to assist it in resolving differences over the system rules between Aurizon Network and its access holders and customers, and among different access holders and customers.

The Authority also expects it will require advice on changes to the draft NBB system rules raised by Aurizon Network, stakeholders, or the Authority, during the development of a satisfactory final version of the rules. The Authority will likely require advice on the impact of these changes as they are proposed, either in the form of a supplement to the initial reports, or through informal discussions.

3. Resources/Data Provided

The consultant will be provided with Aurizon Network's draft NBB system rules, and the related submissions from stakeholders, which are due to be submitted to the Authority by 26 September 2013. The consultant will also be provided with Aurizon Network's draft Capricornia system rules, the Authority's draft decision on these rules, and related documents, including stakeholder submissions.

The Authority will arrange meetings with Aurizon Network and stakeholders, as necessary, to discuss matters that will help the consultant assess the draft NBB system rules.

Additional information relevant to this consultancy may be found in the Authority's publications, available from the Authority or for downloading from its website at www.qca.org.au.

⁵⁶ Dalrymple Bay Coal Terminal (DBCT) is a multi-user port facility in Goonyella; Hay Point Coal Terminal (HPCT) (which is adjacent to DBCT) is a single-user port facility in Goonyella owned by the BHP Mitsubishi Alliance, while Abbot Point Coal Terminal (APCT) is a multi-user port facility in Newlands.

4. Project Time Frame

The consultancy will commence in late October or early November 2013, with a completion date of February 2013.

It is anticipated the Authority will also require advice on the effect of changes to the draft NBB system rules as they are proposed and discussed.

The project's timing will be discussed with the successful tenderer once they have been selected. Dates for completion will be determined at the time of appointment.

5. Proposal Specifications and Fees

The proposal should:

- include the name, address and legal status of the tenderer;
- provide the proposed methods and approach to be applied;
- provide a fixed price quote for completing the consultancy tasks outlined in (a) to (g) of Section 2 above;
- provide a cost per hour for performing dynamic capacity modelling for the NBB coal systems, and for providing advice on any capacity modelling supplied by stakeholders, as set out in task (h) of Section 2 above;
- provide a cost per hour for further advice to the Authority as it considers amendments to the draft NBB system rules; and
- nominate the key personnel who will be engaged on the assignment together with the following information:
 - name;
 - professional qualifications;
 - general experience and experience which is directly relevant to this assignment;
 - expected time each consultant will work on the project; and
 - standard fee rates for any contract variations.

The fee quoted is to be inclusive of all expenses and disbursements. A full breakdown of consultancy costs is required with staff costs reconciled to the consultancy workplan.

Payment will be made within 28 days of receiving an invoice at the conclusion of the report outlined in (a) to (g) of Section 2.

Where agreed with the consultant that task (h) of Section 2 will be required, a payment will be made within 28 days of receiving the invoice for services.

Payments for further advice after the report (and dynamic capacity-modelling results, if required) are completed will be based on monthly invoices, paid within 28 days.

6. Contractual Arrangements

This consultancy will be offered in accordance with the Authority's standard contractual agreement.

This agreement can be viewed at <http://www.qca.org.au/about/consultancyagreement.php>

7. Reporting

The consultant will be required to provide the Authority with progress reports on an "as needs" basis or at least weekly. Drafts of final reports will be required prior to project completion. If necessary, the consultant should advise at the earliest opportunity any critical issues that may impede progress of the consultancy, particularly issues that impact on the successful delivery of the consultancy's objectives outlined in Section 2 above.

At the conclusion of the consultancy, the consultant will be required to provide the Authority with a personal presentation on the findings of the analysis in addition to presenting three (3) copies of a written report. An electronic version of the final report is also required, saved in Microsoft® Word (or pdf) with any numeric data in Microsoft® Excel.

8. Confidentiality

Under no circumstance is the selected consultant to divulge any information obtained from the Authority or a third party for the purposes of this consultancy to any party, other than with the express permission of the Authority or the relevant third party.

9. Conflicts of Interest

For the purpose of this consultancy, the consultant is required to affirm that there is no, and will not be any, conflict of interest as a result of this consultancy.

10. Authority Assessment of Proposal

The Authority uses the following format to assess tenders:

Weight	Criteria	Description
Binding	Conflict of interest	Identification of: <ul style="list-style-type: none"> • actual conflict • perceived conflict • past, current or upcoming work for any of the stakeholders involved
40%	Technical expertise of Proposed Team	Do the proposed individuals have experience in the types of projects required by this consultancy? What skill sets / experience makes them particularly appropriate for this consultancy? Does the team cover all disciplines required? For this consultancy, the required capabilities include background in train scheduling and control, capacity assessments for heavy-haul bulk railways (using both static and dynamic modelling), and familiarity with Aurizon Network's operations.
20%	Firm Experience	Previous experience that the firm can bring to bear

		on the project. Track record of the firm in undertaking the same, or similar, types of projects. Does the firm have any special resources that give it an advantage over other firms in undertaking this project?
30%	Proposed Methodology and Approach	The proposal clearly identifies the methodology the consultant intends to use to undertake the task. The consultant has structured the proposal such that it is clear there is a comprehensive understanding of the tasks, issues and the outcomes required.
10%	Resourcing	(i) the proposal itemises the resources that will be used and provides a breakdown of how, when and where they will be used (7%); (ii) the firm appears able to provide backup expertise in the event it is needed (3%).
	Value for Money	Consideration will be given for: hourly rates; <ul style="list-style-type: none">• total number of hours proposed; and• scope of works proposed in the methodology in relation to the total cost quoted.

In making its assessment against the criteria, the Authority will place most weight on relevant experience of the team members involved and the proposed method and approach for completing the project.

11. Insurance

The consultant must hold all necessary WorkCover and professional indemnity insurance.

12. Quality Assurance

The consultant is required to include details of quality assurance procedures to be applied to all information and outputs provided to the Authority.

13. Grievances

If you wish to raise any grievances or make a complaint during the course of your engagement, please contact Mrs Robyn Farley-Sutton, Director Corporate Services, on (07) 3222 0505 or robyn.farley-sutton@qca.org.au.

14. Lodgement of Proposals

Proposals are to be lodged with the Authority by **5.00 p.m., Friday, 11 October 2013.**

For further information concerning this consultancy, please contact Stephen Wisenthal, Principal Analyst on (07) 3222 0507.

Proposals should be submitted to:

The Chief Executive Officer
Queensland Competition Authority
GPO Box 2257
Brisbane Qld 4001
Phone: (07) 3222 0555
Fax: (07) 3222 0599
Email: rail@qca.org.au

APPENDIX B – STAKEHOLDER MEETINGS

Date	Stakeholder	Location	Attendees
2 nd December 2013 11.00am	Aurizon Network Control	Rockhampton Control Centre	Daryl Johnson Control Centre Manager
4 th December 2012 2.00pm	Asciano (Pacific National)	QCA Offices Brisbane	Stuart Ronan Manager Access & Regulation (Asciano) Chris Wicks (PN) Ying Yeung (PN) Hiresh Devaser (QCA) Stephen Wisenthal (QCA)
4 th December 2012 3.45pm	Peabody Energy	QCA Offices Brisbane	Mark Smith Manager Infrastructure (also DBTC User Group Chairman) Hiresh Devaser (QCA) Stephen Wisenthal (QCA)
5 th December 2012 11.30am	Aurizon Network	Aurizon Network Offices Brisbane	Luke Martin Rebecca Douglas
5 th December 2012 1.30pm	Rio Tinto	QCA Offices Brisbane	Xiao-Fan Zhuang Manager Infrastructure Strategic Development Ian Gibbons Senior Manager Coal Chain Stephen Wisenthal (QCA)
5 th December 2012 3.00pm	Vale	QCA Offices Brisbane	Eduardo Luz Anneliese Mattos Paul Hartfiel Stephen Wisenthal (QCA)
6 th December 2012 10.00am	Anglo American Metallurgical PL	QCA Offices Brisbane	Ken Moore Infrastructure Strategy

Date	Stakeholder	Location	Attendees
			Manager Graham Clelland Consultant Advisor (Anglo) Jo Daniels (Allens, adviser to Anglo American) Rowan Kendall (Allens, adviser to Anglo American) Hiresh Devaser (QCA) Stephen Wisenthal (QCA)
6 th December 2012 11.15am	Aurizon Above Rail	QCA Offices Brisbane	Steve Harris Rachel Martin Hiresh Devaser (QCA) Stephen Wisenthal (QCA)

Arthur Smith and Dan McKell attended all meetings on behalf of Indec.

APPENDIX C – STAKEHOLDER MEETING QUESTIONS – AURIZON NETWORK

1. Were the QCA's recommendations for the Capricornia system rules review accommodated in the NBB System Rules?
2. Does Aurizon Network believe that there is sufficient transparency provided for in the NBB system rules?
3. Does Aurizon Network have any difficulty in providing the MTP to all stakeholders?
4. Does Aurizon Network see any benefit in the publication of the network's performance and is there any opportunity to improve this reporting?
5. Does Aurizon Network monitor the capacity of the network and is it the intention to develop a degree of transparency in regard to the need for additional capacity as the demand on the network grows?
6. What are Aurizon Network's thoughts on the producers holding the access agreements rather than the rail operators?
7. Are there any opportunities for Aurizon Network to improve clarity of access through the maintenance program?
8. Are there any other observations Aurizon Network would like to make in relation to the system rules?

APPENDIX D –STAKEHOLDER MEETING QUESTIONS – OTHER

1. In your opinion, are the proposed network rules based on sound processes?
 - a. If not, which processes could be enhanced?
 - b. What needs to occur to ensure the processes are more efficient?
2. Do you believe that there is sufficient transparency provided for in the NBB system rules?
 - a. What will improve the transparency provided through the System Rules?
3. What consultation occurs when negotiating paths for timetabled traffic?
4. Do the NBB system rules provide for the correct consultation mechanisms from Aurizon Network to stakeholders?
 - a. Are the timeframes outlined in the proposed NBB system rules sufficient to allow stakeholders due consideration time for proposed ITP?
 - b. Do Aurizon Network provide enough consultation and visibility on upcoming maintenance activities and system outages?
 - c. If not, how could this be improved?
5. What is the primary driver in the efficient allocation of surge capacity (ad hoc) paths?
6. Is there enough flexibility in path allocation through the ITP process?
7. At what point is it reasonable for Aurizon Network to 'lock in' the schedule without TSE holders incurring penalties for making changes?
8. What type of information should be distributed and when amongst stakeholders?
9. Should information regarding system performance be made available to all stakeholders?
10. Do the system rules favour any one stakeholder over another?
11. If so, how?
12. Are there any other observations you would like to make in relation to the system rules?