

TARCOOLA-DARWIN RAILWAY: 10-YEAR REVIEW OF REVENUES

Final Report

August 2015



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The Essential Services Commission of South Australia is an independent statutory authority with functions in a range of essential services including water, sewerage, electricity, gas, rail and maritime services, and also has a general advisory function on economic matters. For more information, please visit www.escosa.sa.gov.au.

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GLOSSARY OF TERMS

AARC	AustralAsia Railway Corporation
ACCC	Australian Competition and Consumer Commission
Access Providers	Asia Pacific Transport Pty Ltd and subsequently GWAN
Act	<i>AustralAsia Railway (Third Party Access) Act 1999</i>
APT	Asia Pacific Transport Consortium
ARA	Australasian Railway Association
BOOT	Build, own, operate and transfer
Booz	Booz Allen Hamilton (Consultants)
Code	AustralAsia Railway (Third Party Access) Code contained in the Schedule to the Act
Commission	The Essential Services Commission of South Australia
DCF	Discounted Cash Flow
DORC	Depreciated Optimised Replacement Cost, which represents the cost of replicating an asset in the most efficient way possible from an engineering perspective, less accumulated depreciation.
ERA	Economic Regulation Authority (WA)
ESCV	Essential Services Commission of Victoria
FreightLink	The first company awarded the contract to operate the Tarcoola – Darwin Railway
GTK	Gross tonnes x kilometres travelled
GWAN	GWA (North) Pty. Limited, a wholly owned subsidiary of Genesee & Wyoming Inc.
KGTK	Thousands of Gross Tonne Kilometres
kt	Kilo tonne (1,000 tonnes)
MCA-NTD	Minerals Council of Australia, NT division

Pricing Principles	Access Pricing Principles, under the Code
QCA	Queensland Competition Authority
RAB	Regulatory Asset Base, which is the asset base upon which the regulated business can earn a return
Railway	The railway line that runs from Tarcoola, South Australia to Darwin, Northern Territory, including all associated earthworks and infrastructure
Relevant Access Holders	Access holders for those infrastructure services for which no sustainable competitive prices exist
Relevant Revenues	The revenues paid or payable by access holders to the access providers for railway infrastructure services where no sustainable competitive prices exist.
Required Railway Infrastructure	The infrastructure used by the Relevant Access Holders
Review Period	15 January 2004 to 30 June 2013
2005 Valuation	The DORC valuation of the Railway, prepared by Booz for APT in March 2005

EXECUTIVE SUMMARY

The Commission’s finding is that excessive access revenues have not been earned in respect of non-competitive infrastructure services provided on the Tarcoola-Darwin Railway for the period from 15 January 2004 to 30 June 2013.

The Tarcoola-Darwin railway (**Railway**), currently owned and operated by GWA (North) Pty Ltd (**GWAN**), is subject to a third party access regime established under the *AustralAsia Railway (Third Party Access) Act 1999 (Act)* for railway infrastructure services. This regime, as set out in the AustralAsia Railway (Third Party Access) Code (**Code**) is intended to ensure that access to railway infrastructure services provided by a monopoly operator is available on reasonable commercial terms.

The Code includes a mechanism to assess whether the access regime has been broadly successful in its first 10 years (and every five years thereafter) and, if it has not, to put in place more targeted regulatory measures which will promote the achievement of that aim in the future.

The Code requires the Essential Services Commission of South Australia (**Commission**) to review certain revenues generated by GWAN and the former access provider Asia Pacific Transport Pty Ltd (together the **Access Providers**) to ensure that they are not excessive, having regard to matters set out in the Code. This first review covers the period beginning at the date that the Railway commenced operations on 15 January, 2004 and concluding on 30 June 2013 (**Review Period**). Successive reviews must occur for every subsequent five-year period.

The excessive revenue test seeks to determine whether or not the revenues paid or payable by relevant access holders to the Access Providers for railway infrastructure services where no sustainable competitive prices exist have been excessive. If the Commission determines that excessive revenues have been earned for those services (i.e. if relevant revenues exceed relevant costs, including a reasonable cost of capital), the second step of the process requires GWAN and the Commission to seek to agree a “remedial plan” to ensure that revenues (and profits) for the next five years are not excessive. Failure to agree on the terms of such a plan would result in the Commission making a determination to ensure that the future over-recovery of revenues does not occur.

It is important to note that, even in the event that this review identifies that excessive revenues have been earned by the Access Providers for relevant railway services, the prices charged for such services will not be amended retrospectively. Rather, any amended prices would apply for the remainder of the next five-year review period.

Unless otherwise stated, all dollar amounts in this report reflect real December 2014 prices.

Relevant services

The Access Providers provide various railway infrastructure services on the Tarcoola-Darwin Railway, including freight infrastructure services and passenger infrastructure services. In accordance with the Code, the excessive revenue test excludes passenger infrastructure services and any freight infrastructure services where a sustainable competitive access price exists. The Commission's finding is that it is only the provision of access for bulk freight services, such as the transportation of mineral ores, that are the relevant services for this review.

Relevant revenues

Relevant revenues are those revenues that can be attributed to customers for whom no sustainable competitive access price exists (i.e. access revenues for bulk freight). Relevant revenues over the Review Period were \$136.6m.

Relevant costs

Relevant costs are those which are attributable to the provision of relevant services. GWAN does not record revenue or operating or capital costs by railway segment, nor does it allocate costs by customer or contract. An allocation methodology is therefore required, in order to allocate relevant costs to relevant services.

Depending upon the allocation methodology used, and the asset base adopted, relevant costs, which include avoidable costs and a contribution to fixed costs, ranged from \$197.2m to \$408.9m. The asset base is based upon a valuation conducted using a Depreciated Optimised Replacement Cost (**DORC**) methodology in accordance with the Code's requirements. For the purposes of this review, the Commission has employed a range of asset bases, the lower bound of which excludes Government financial and asset contributions. The upper bound includes those contributions.

The Commission's finding is that excessive revenues have not been earned for bulk freight services provided by the Access Providers

The Commission has reviewed the relevant revenues and relevant costs of providing the relevant railway services (bulk freight infrastructure services) and has reached the finding that, irrespective of the cost allocation methodology selected, the relevant revenues over the review period were not excessive. The basis of this finding is summarised below:

Summary of relevant revenues and relevant costs (\$m Dec 2014)

	AVOIDABLE COSTS	CONTRIBUTION TO FIXED COSTS	TOTAL COSTS	RELEVANT REVENUE	EXTENT TO WHICH REVENUES UNDER RECOVER COSTS
Revenue cost allocation method	n/a	n/a	n/a	136.6	n/a
"Cost Drivers" cost allocation method	41.4	158.5 - 367.5	199.9 - 408.9	136.6	63.3 - 272.4
KGTK cost allocation method	40.8	156.4 - 362.7	197.2 - 403.6	136.6	60.7 - 267.0

The analysis summarised in the table above represents the application of the excessive revenue test contained in the Code. It does not, and should not be, taken to reflect the profitability of the Access Providers. That is determined using accounting rather than regulatory principles, as different costs, values and assumptions apply.

Consultation to finalise the review

The Final Report follows publication in May 2015 of a Draft Report¹, which set out the Commission's draft findings on its application of the excessive revenue test to determine if the Access Providers had earned excessive revenues from bulk freight infrastructure services over the first 10 years of the Railway operations.

The Commission invited submissions from all members of the community in response to the Draft Report. One submission was received in response, from the Minerals Council of Australia, NT Division (**MCA-NTD**). The MCA-NTD submission is published on the Commission's website.² The Commission has considered the matters raised by MCA-NTD, as referenced throughout this Final Report; however, none of those matters cause the Commission to alter its principal finding that excessive revenues were not earned for the provision of non-competitive infrastructure services provided on the Tarcoola-Darwin Railway over the Review Period.

¹ Essential Services Commission of SA, *Tarcoola-Darwin Railway, 10 year Review of Revenues*, Draft Report, available at <http://www.escosa.sa.gov.au/library/20150507-Rail-Tarcoola-Darwin-TenYearReviewOfRevenues-DraftReport.pdf>

² Minerals Council of Australia, NT Division (MCA-NTD) submission to the Draft Report, Tarcoola – Darwin Railway, 10 year Review of Revenues, available at <http://www.escosa.sa.gov.au/library/20150609-Rail-Tarcoola-Darwin-TenYearReviewOfRevenues-DraftReportSubmission-MCA.pdf>

1. BACKGROUND

The Railway is currently owned and operated by GWA (North) Pty Ltd (**GWAN**).³

Provision of the railway infrastructure services, referred to as below-rail services⁴, on the Railway is subject to a third party access regime, established under the AustralAsia Railway (Third Party Access) Code, which is a Schedule to the *AustralAsia Railway (Third Party Access) Act 1999*.⁵ The Code authorises the Commission to exercise and perform the powers and functions of the regulator for the whole of the Railway between Tarcoola and Darwin.⁶

Above-rail services (the operation of trains and rolling stock) are competitive, and are not subject to economic regulation.

The below-rail access regime is a negotiate/arbitrate model of regulation, which encourages access providers and access seekers to reach negotiated agreements but allows for regulatory arbitration in the event that a dispute cannot be resolved. This framework is intended to ensure that access to railway infrastructure services provided by a monopoly operator is available at reasonable prices.

The Code includes a mechanism to assess whether the access regime has been broadly successful in its first 10 years (and every five years thereafter) and, if it has not, to put in place more targeted regulatory measures which will promote the achievement of that aim in the future.

The Code requires the Commission to assess whether or not excessive revenues have been earned for non-competitive railway infrastructure services (the excessive revenue test).⁷ The first review must be conducted for the period concluding 30 June in the tenth years of operations of the Railway. The Review Period is therefore the period from 15 January 2004 to 30 June 2013.

While GWAN currently owns and operates the Railway, the Asia Pacific Transport Consortium⁸ owned and operated the Railway from its commencement in 2004. That there was more than one access provider during the Review Period does not have any bearing on the scope or nature of this review.

³ GWA (North) Pty Ltd, a wholly owned subsidiary of Genesee and Wyoming; refer http://www.gwrr.com/operations/railroads/australia/genesee_wyoming_australia

⁴ See section 1.2.1 for further information on below-rail services.

⁵ The Act and the Code apply to the Railway constructed between Tarcoola in South Australia and Darwin. The South Australian legislation, the *AustralAsia Railway Third Party Access Act 1999 (SA)* is mirrored by Northern Territory legislation, the *AustralAsia Railway Third Party Access Act 1999 (NT)*.

⁶ The Code applies to the whole of the railway between Tarcoola and Darwin, pursuant to a joint Ministerial notice published in January 2004. Refer <http://www.escosa.sa.gov.au/library/040109-JointMinNotice.pdf>

⁷ The National Competition Council required that a “monopoly rent test” be incorporated into the Code before it could recommend certification as an effective state-based scheme. Refer National Competition Council, *AustralAsia Railway Access Regime, Final Recommendation*, February 2000, pp. 66-72, available at <http://ncc.gov.au/images/uploads/CERaNTre-001.pdf>.

⁸ The Asia Pacific Transport Consortium comprised Asia Pacific Transport Pty Ltd as owner and Freight Link Pty Ltd as operator.

This chapter provides background on the Tarcoola-Darwin Railway, the access regime it is subject to and the purpose of, and methodology for, reviewing the relevant revenues earned and relevant costs of providing the relevant services for the 10-year period to 30 June 2013.

Unless otherwise stated, all dollar amounts in this report reflect real December 2014 prices.

1.1 The Tarcoola-Darwin Railway

The Railway comprises both an older section of standard gauge line between Tarcoola and Alice Springs⁹ measuring 824 km and the more recently constructed section of standard gauge line between Alice Springs and Darwin measuring 1,420 km. Construction of the new section of line from Alice Springs to Darwin commenced in 2001 at a cost of approximately \$1.6 billion. The first train from Adelaide arrived in Darwin on 17 January 2004. A map of the Railway appears in Figure 1-1. Note that the railway from Adelaide to Tarcoola does not form part of this Review.

Figure 1-1: Tarcoola to Darwin Railway (shown in red)



Source: GWAN

⁹ The line between Tarcoola and Alice Springs was built during the 1980s and replaced several older sections of line (along different routes) completed during the 1920s and which had their origins in the 1870s.

1.1.1 Original commercial and legal structure

The AustralAsia Railway Corporation (**AARC**) was established in 1997 to build the Alice Springs to Darwin section of the Railway. In accordance with an inter-Governmental agreement between the Northern Territory and South Australian Governments, the AARC consists of representatives drawn from both the Northern Territory and South Australian Governments, with the Chair appointed by the Northern Territory Minister responsible for the Railway.

In 2000, AARC awarded the contract to design, construct and operate the Railway under a build, own, operate and transfer back (**BOOT**) arrangement to the Asia Pacific Transport Consortium (**APT**).¹⁰ Ownership of the Railway is scheduled to be transferred back to AARC in 2054—that is, after 50 years of operation.

The 50-year concession right to operate the Railway is granted under the AustralAsia Railway Project Concession Deed, to which APT, AARC and the Governments of South Australia and the Northern Territory are parties.

In turn, APT awarded the contract to operate the Railway to Freight Link Pty Ltd (**FreightLink**), a related body corporate of APT.

1.1.2 Financial contributions

While the Railway is owned and operated privately under the terms of the concession described above, the Federal Government and the Governments of South Australia and the Northern Territory contributed initial funding in approximately equal portions, totalling \$579.8 m.¹¹

In comparison, at the time of the commencement of the operation of the Railway, it is estimated that the value of private capital invested in the Railway was \$992.2 m¹².

A valuation of the Railway was undertaken for APT by Booz Allen Hamilton (**Booz**) in 2005, at \$2,301.4m¹³ using the DORC methodology (**2005 Valuation**). The 2005 Valuation was undertaken:

“for the purpose of satisfying the Commission as to the likely magnitude of any access price ceiling that might apply to freight traffics hauled on the AustralAsian railway...”¹⁴

¹⁰ At the time, the APT consortium partners were Kellogg Brown & Root, John Holland Group, Carillion plc, Macmahon Holdings, and Australian Railroad Group (ARG). ARG was a partnership between Wesfarmers and Genesee & Wyoming.

¹¹ AustralAsia Railway Corporation, *Annual Report 2002-03*, p. 11, available at <http://www.aarail.com.au/wp-content/uploads/2012/08/anreport02-03.pdf>

¹² Essential Services Commission of South Australia, *Rail Industry (Tarcoola-Darwin) Guideline No. 2*, September 2008, p. 12, available at <http://www.escosa.sa.gov.au/library/080818-TarcoolaArbitratorPricingRequirements-GuidelineNo2.pdf>.

¹³ Expressed as \$1,696.9m in nominal terms in the valuation report.

¹⁴ Booz Allen Hamilton, *Asia Pacific Transport Standard Gauge Rail Network DORC*, March 2005

The valuation of \$2,301.4m comprised:

- ▲ the section of line from Alice Springs to Darwin, valued at \$1,572.0m including Government funded construction of \$579.8 million and the private capital investment of \$992.2 m; and
- ▲ the section of line from Tarcoola to Alice Springs¹⁵, valued at \$729.4m.

1.1.3 Other Government contributions

As noted above, the primary Government support for the project was in the form of capital contributions from each Government. In addition to these capital contributions, the Federal and Northern Territory Governments also contributed various physical assets. In particular:

- ▲ the Federal Government contributed an asset in the form of the existing Tarcoola to Alice Springs railway,¹⁶ and
- ▲ the Northern Territory Government contributed sub-leases in respect of the railway corridor located within the Northern Territory.¹⁷

Although the three contributing Governments do not require a financial return on the capital invested for their asset contributions at any time during the concession period, they do require the contributed physical assets to be returned to them at the expiry of the concession, along with the transfer of all project-funded assets.¹⁸

1.1.4 Receivership and sale

In November 2008, APT was placed into receivership. In 2010, GWAN paid \$334m (nominal) for APT's assets, which included the concession over the Railway. In so doing, GWAN obtained the right to operate the Railway for the remainder of the 50-year concession period.

¹⁵ Ownership of the Tarcoola to Alice Springs section of the Railway resides with the Australian Rail Track Corporation (ARTC). However, it is also subject to a 50-year lease to AARC and forms a part of the concession to GWAN.

¹⁶ The asset is to be returned to the ARTC upon the expiry, or early termination, of the concession paid.

¹⁷ These leases revert to the Northern Territory Government upon expiry, or early termination, of the concession period.

¹⁸ Essential Services Commission of South Australia, *Australasian Railway (Third Party Access) Code: Guideline Review Final Decision*, September 2008, page 5, available at <http://www.escosa.sa.gov.au/library/080811-AustralAsiaRailGuidelineReview.pdf>

1.2 The Access Regime

The Commission is the regulator for the third party rail access regime established under the Code.¹⁹ The Code was certified by the Federal Treasurer in 2000 as an effective state-based regime until 31 December 2030.²⁰

1.2.1 Negotiate/arbitrate framework

The Code sets out the framework for third party access to railway infrastructure services. The Code unbundles railway infrastructure services (both freight and passenger) into:

- ▲ below-rail services (relating to the provision of track and associated infrastructure), and
- ▲ above-rail services (running rolling stock, or trains, on the below-rail infrastructure).

The Code regulates the provision of below-rail services only. It establishes a right for above-rail operators to negotiate access to the below rail services of the Railway.

The Code sets out the rights and responsibilities of above-rail operators (access seekers) and the access provider (APT, subsequently GWAN), and covers matters such as the negotiation process, dispute resolution, and the terms and conditions of access.

The Code requires both the access provider and the access seeker to negotiate in good faith and in accordance with the provisions of the Code with a view to agreeing an access contract (or a significant variation to an existing access contract). Where, following negotiations, there is no reasonable prospect of agreement being reached, the access seeker may refer the dispute to the Commission, with a request that the Commission refer the dispute to arbitration (noting that the Commission may initially attempt to resolve the dispute by conciliation).

Where the parties remain in dispute, the Commission must appoint an independent arbitrator to resolve the dispute in accordance with the Code. In determining the price that may be charged by access providers to access seekers, the arbitrator must take the matters set out in clause 21 of the Code into account, which includes the Access Pricing Principles (**Pricing Principles**). An award made by the arbitrator is binding on both parties.

Access negotiations are supported by enforceable dispute resolution processes. The arrangements of the Code recognise that some issues may be small or time sensitive so that above-rail operators may not take them to arbitration, given the time and costs involved.

¹⁹ Refer section 5 of the Code.

²⁰ The Federal Treasurer accepted the recommendation of the National Competition Council that the scheme should be certified as an effective access regime for the purpose of Section 44N of the *Trade Practices Act 1974 (now the Competition and Consumer Act 2010)*. In making this decision, the Treasurer was satisfied that the regime conforms with the principles set out in clause 6 of the *Competition Principles Agreement 1995*. Refer National Competition Council – Statement of Reasons, available at <http://ncc.gov.au/images/uploads/CERaNTDe-001.pdf>

Without a less costly means of dispute resolution, many small or time-sensitive disputes could go unresolved. This could discourage access.

The Code provides several levels of dispute resolution including:

- ▲ advice provided by the Commission on whether or not a negotiated outcome is consistent with the Code
- ▲ voluntary conciliation by the Commission, and
- ▲ full arbitration.

The Code includes a Pricing Schedule which provides direction for access pricing in different circumstances.

All prices for access are to be struck within a floor/ceiling band, set in accordance with efficient, forward looking costs. Where competition from non-rail freight is sufficient to discipline rail operators to minimise their costs and prices, the Code's "sustainable competitive" approach uses the price of the competitive non-rail freight as the starting point for calculating the rail access price between the floor/ceiling band. This ensures that access prices are based on competitive principles.

The Code also recognises the importance of service quality, time-path allocation and reallocation policies and day-to-day train management. The access providers must develop policies on how they will manage these issues. These policies are to be consistent with guidelines developed by the Commission.

1.2.2 Access guidelines

The Commission has developed four guidelines under the Code:

- ▲ Rail Industry (Tarcoola-Darwin) Guideline No. 1 – Access Provider Reference Pricing and Service Policies²¹
- ▲ Rail Industry (Tarcoola-Darwin) Guideline No. 2 – Arbitrator Pricing Requirements²²
- ▲ Rail Industry (Tarcoola-Darwin) Guideline No. 3 – Regulatory Information Requirements²³
- ▲ Rail Industry (Tarcoola-Darwin) Guideline No. 4 – Compliance Systems and Reporting²⁴

²¹ Refer http://www.escosa.sa.gov.au/library/040213-Tarcoola-DarwinRailGuidelineNo_1-AccessProviderReferencePricing_ServicePolicies.pdf

²² Refer <http://www.escosa.sa.gov.au/library/080818-TarcoolaArbitratorPricingRequirements-GuidelineNo2.pdf>

²³ Refer http://www.escosa.sa.gov.au/library/040607-Tarcoola-DarwinRailGuidelineNo_3-RegulatoryInformationRequirements.pdf

²⁴ Refer http://www.escosa.sa.gov.au/library/050428-Tarcoola-DarwinRailGuidelineNo_4-ComplianceSystems_Reporting.pdf

The guidelines establish a light-handed framework that requires the access providers to develop policies that comply with the Code requirements. Any potential non-compliance with the requirements of the Code are identified by a referral of an issue to the Commission by an access seeker. The Code provides the Commission with the power to conciliate an access dispute and/or arrange for arbitration.

The Commission undertook a review of the Code in 2006²⁵ and a review of the guidelines in 2008.²⁶

During the Review Period no access disputes were referred to the Commission. It is acknowledged however, that this does not necessarily provide conclusive evidence that the access regime is working efficiently and effectively.

1.3 Purpose and scope of this review

1.3.1 The test for excessive revenues.

The Code requires the Commission to test for excessive below-rail revenues paid or payable by access holders to access providers for railway infrastructure services where no sustainable competitive prices exist—the relevant revenues.²⁷ The test is outlined in the following section.

²⁵ <http://www.escosa.sa.gov.au/Publications/DownloadPublication.aspx?id=882>

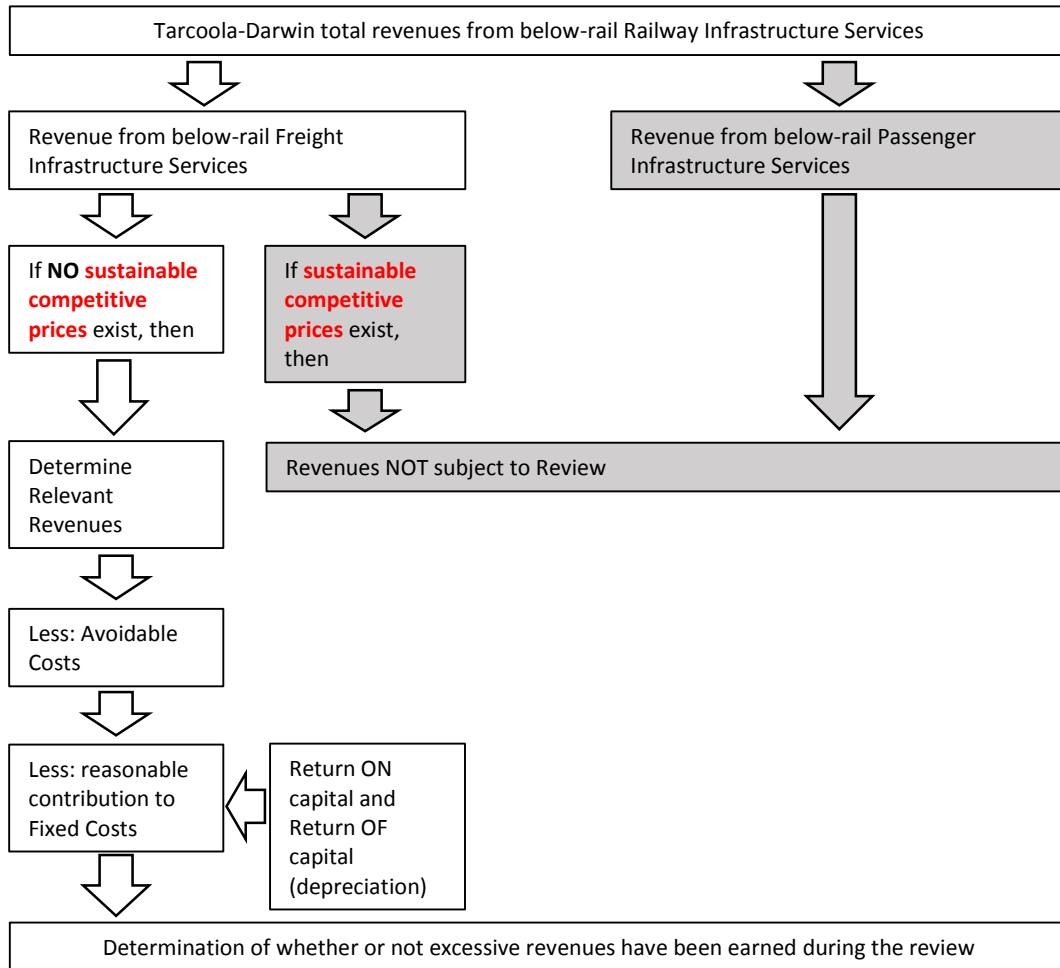
²⁶ <http://www.escosa.sa.gov.au/library/080811-AustralAsiaRailGuidelineReview.pdf>

²⁷ Refer section 50(4) of the Code, available at http://www.escosa.sa.gov.au/library/010331-AustralAsiaRailwayThirdPartyAccessAct_1999AndCode.pdf

1.3.2 Identifying relevant services, revenues and costs

The methodology for identifying and assessing the relevant services, revenues and costs as required under the Code is outlined in Figure 1-2.

Figure 1-2: Process for assessing relevant services, revenues and costs



Stage 1 of the review requires the Commission to review the revenues paid, or payable, by access holders to access providers for non-competitive railway infrastructure services over the Review Period, and to determine if these revenues are excessive, having regard to the costs of those services.

In determining whether “a sustainable competitive price” exists, the criteria set out in the Pricing Principles must be used. Those criteria are discussed in Chapter 2.

Assuming no “sustainable competitive prices” exist, the Commission must determine if revenues received were excessive and, in so doing, it must have regard to the following:

- ▲ the revenues measured against the efficient costs associated with the railway infrastructure required by access holders including an appropriate commercial return²⁸
- ▲ the investment in all railway infrastructure facilities by any person and all revenues earned by access providers for the provision of railway infrastructure services including, if transportation services have been conducted, revenues at market rates in relation to those services, and
- ▲ an appropriate commercial return on railway infrastructure having regard to:
 - the appropriate risk premium associated with the expected risks prevailing at the date of:
 - construction of the Railway (circa 2000), and
 - any expansion or extension of the Railway, and
 - relevant financial market rates prevailing at the time of the Review.

This review focusses on costs and revenues from non-competitive below rail services. This review does not focus on the individual prices that users may have paid for those services during the first 10 years of operation of the Railway. The Code provides flexibility for prices to vary based on individual access requirements and includes a conciliation and arbitration framework to address any pricing disputes. This review is distinct from that framework and is not intended to analyse the efficiency of specific prices paid by individual access holders.

If excessive revenues are found, Stage 2 of the review requires GWAN to submit to the Commission, within two months of the determination, a “remedial plan” for approval. This plan must ensure that revenues for the next five years are not excessive.²⁹

If the Commission and GWAN agree on the terms of the proposed “remedial plan”, GWAN will then implement its “plan”. If, however, the Commission and GWAN do not agree within one month of the “remedial plan” being submitted, the Commission must then make a price determination for the forthcoming five year regulatory period.

It is important to note that even in the event that this review identifies excessive revenues have been earned for railway infrastructure services where no sustainable competitive price exists, the prices charged for such services will not be amended retrospectively. Rather, any amendments required would apply for the remainder of the next five-year review period.

²⁸ When comparing the revenues to costs, the Commission must deduct from those costs an amount, being the aggregate of avoidable costs attributable to the usage of railway infrastructure by all other access holders and a reasonable contribution to fixed costs from all other access holders.

²⁹ If the Commission does not determine that revenues are excessive, then the Review will cease at this point. There is no power for the Commission to consider whether forecast future revenues to be received by GWA are reasonable.

1.4 Consultation to develop this report

1.4.1 Submissions arising from Issues Paper

The Commission released an Issues Paper³⁰ in November 2014 seeking submissions from interested parties—particularly those that have been directly involved in the use of the Railway or transportation that may compete with the Railway—on the railway infrastructure services that have been subject to sustainable competition over the past 10 years.

As this review is limited to assessment of the “relevant revenues”, specific comment was sought on the threshold issue of which railway infrastructure services are subject to a sustainable competitive price. Two submissions were received in response to the Issues Paper, from:

- ▲ Asciano³¹
- ▲ MCA-NTD³²

1.4.2 Submissions arising from Draft Report

The Commission released its Draft Report in May 2015, inviting further submissions from interested parties. One submission was received, from MCA-NTD.³³

The issues raised by stakeholders through both of the consultation periods have been carefully considered and, where relevant, certain arguments and submissions have been mentioned in the text, either by direct quotation or by reference to themes or arguments, to assist stakeholders to understand the proposed positions that have been reached.

However, a failure to reference an argument or submission does not mean that it has not been taken into account in reaching the proposed positions. While not all of the positions put in the submissions have been adopted, all submissions have been helpful in informing the consideration of each of the relevant issues and the competing viewpoints.

In addition to the written submissions received, in conducting this review, the Commission has relied upon information provided by GWAN on the revenues earned from railway infrastructure services and the cost of providing those services during the Review Period,

³⁰ Refer <http://www.escosa.sa.gov.au/library/20141119-Rail-Tarcoola-DarwinRailway-TenYearReviewRevenues.pdf>

³¹ Asciano submission, December 2014, available at <http://www.escosa.sa.gov.au/library/20150109-Rail-Tarcoola-Darwin10yrReviewIssuesPaperSubmission-Asciano.pdf>.

³² The Minerals Council of Australia (MCA-NTD), Northern Territory Division provided a preliminary submission in December 2014, available at <http://www.escosa.sa.gov.au/library/20150109-Rail-Tarcoola-Darwin10yrReviewIssuesPaperSubmission-MineralsCouncilNTDivision.pdf>. A further comprehensive submission was provided in February 2015, available at <http://www.escosa.sa.gov.au/library/20150209-Rail-Tarcoola-Darwin10yrReviewIssuesPaperSubmissionComprehensive-MineralsCouncilNTDivision.pdf>.

³³ MCA-NTD, Submission to the 2015 Draft Report of the Tarcoola-Darwin Railway: 10 year review, June 2015, available at <http://www.escosa.sa.gov.au/library/20150609-Rail-Tarcoola-Darwin-TenYearReviewOfRevenues-DraftReportSubmission-MCA.pdf>

including but not limited to information provided in regulatory accounts under Rail Industry (Tarcoola-Darwin) Guideline No. 3.³⁴

1.4.3 Submissions outside the scope of the Review

MCA-NTD submitted that application of a negotiate-arbitrate framework is inappropriate when there is information asymmetry and a lack of transparency between the negotiating parties.³⁵ MCA-NTD suggested that a better alternative would be to introduce standard access agreements, similar to those presented by Australian Rail Track Corporation and Aurizon Network. This would, according to MCA-NTD, reduce protracted negotiations, limit information asymmetry and ensure that outcomes are not unfairly balanced towards that of access providers.

The issues of information asymmetry and lack of transparency were also raised by Asciano³⁶ and MCA-NTD³⁷ in their submissions to the Issues Paper³⁸ which preceded the Draft Report. The Commission considers that these concerns relate mainly to the nature of the regulatory regime under the Code and are outside the scope of this Review. However, some of the concerns raised by MCA-NTD and Asciano relate to the requirements of the Guidelines³⁹ issued by the Commission under the Code and the Commission intends to review those Guidelines following this review. Public consultation on the need for any changes to the Guidelines to introduce greater transparency and information disclosure will occur through that process. The review of Guidelines will not, however, examine the merits of moving from a negotiate-arbitrate framework to an alternative framework, such as standard access agreements, as any such change would require a change in the Act. A change of that nature is outside of the Commission's purview.

³⁴ In submitting its regulatory accounts, GWAN is required to provide an accompanying statement of compliance, containing assurance that the Regulatory Accounts have been prepared in accordance with the requirements of Rail Guideline 3. The statement must be signed by at least two of GWAN's Directors, one of whom must be a Non-Executive Director. Refer http://www.escosa.sa.gov.au/library/040607-Tarcoola-DarwinRailGuidelineNo_3-RegulatoryInformationRequirements.pdf.

³⁵ MCA-NTD submission to the Draft Report, pp. 8-9.

³⁶ Asciano, *Submission to ESCOSA Issues Paper – Tarcoola-Darwin Railway – ten year Review of revenues*, December 2014, page 4, available at <http://www.escosa.sa.gov.au/library/20150109-Rail-Tarcoola-Darwin10yrReviewIssuesPaperSubmission-Asciano.pdf>

³⁷ MCA-NTD², *Tarcoola-Darwin Railway – ten year review of revenues, comprehensive response to ESCOSA Issues Paper*, February 2015, page 3, available at <http://www.escosa.sa.gov.au/library/20150209-Rail-Tarcoola-Darwin10yrReviewIssuesPaperSubmissionComprehensive-MineralsCouncilNTDivision.pdf>

³⁸ Essential Services Commission of SA, *Issues Paper, Tarcoola-Darwin Railway – ten year review of revenues*, available at <http://www.escosa.sa.gov.au/library/20141119-Rail-Tarcoola-DarwinRailway-TenYearReviewRevenues.pdf>

³⁹ The Guidelines are available on the Commission's website at <http://www.escosa.sa.gov.au/sa-rail-overview/codes-guidelines.aspx>.

2. DETERMINING RELEVANT REVENUES

The Commission's finding is that the relevant revenue for this review is restricted to the below-rail access revenue earned by GWAN during the Review Period for bulk transport freight services of \$136.6m.⁴⁰

2.1 Relevant revenues

The Code defines the relevant revenues for this review as those paid or payable by access holders to the Access Providers for railway infrastructure services for which no sustainable competitive prices exist. The relevant revenues must exclude that which is derived from passenger services and sustainable freight services.

As outlined in section 2.2 below, this review has found that relevant revenues are limited to the below-rail revenues generated by the Access Providers in respect of the transportation of bulk freight.⁴¹

The relevant revenues were determined using the following process:

- ▲ determine the total below-rail revenues from railway infrastructure services
- ▲ from the total below-rail revenues for railway infrastructure services, determine the below-rail revenue from freight infrastructure services and passenger infrastructure services
- ▲ of the total below-rail freight revenues, separate the revenues from railway infrastructure services for which no sustainable competitive price exists (relevant revenues) from those that are subject to competition.

Table 2.1 summarises the below-rail (**Access**) revenue earned by GWAN and APT during the Review Period.

⁴⁰ Unless otherwise stated, all dollar amounts in this report reflect real December 2014 prices.

⁴¹ Bulk freight generally involves large quantities of homogenous product, typically liquid or crushed solid material, transported en-masse, and without packaging. It is easy to load and unload from freight vehicles as it is generally poured or pumped into transport holds. Apart from food products (such as wheat, milk and, to lesser extent, sugar) bulk freight tends to be relatively non-perishable and non-fragile. Much bulk freight is low unit value but high volume. Refer Bureau of Infrastructure, Transport and Regional Economics, *Road and rail freight: competitors or complements?*, p. 2.

Table 2-1: Revenue earned by GWAN/APT during the Review Period

Revenue source	Nominal	Real December 2014
Bulk freight access services	\$124.0m	\$136.6m
Inter-modal freight services	\$181.2m	\$214.4m
Passenger services	\$28.4m	\$33.3m
Total	\$333.6m	\$384.3m

Source: nominal figures provided by GWAN; indexed using ABS CPI All Groups index

This chapter provides an assessment of the relevant revenues earned from the relevant services for the Review Period.

2.2 Services subject to sustainable competition

The Issues Paper sought submissions on which Railway services had been subject to sustainable competition during the first 10 years of operation of the Tarcoola-Darwin Railway. In response, MCA-NTD submitted that all below rail services on the Railway lack a sustainable competitive price, drawing on the Queensland Competition Authority's (QCA) statement that:

*"competitive markets include large numbers of buyers and sellers, costless entry and exit for firms, perfect information, homogeneous goods and services, no transaction costs, and the ability to manage risk effectively."*⁴²

The Commission notes that the QCA went on to acknowledge that these assumptions about a perfectly competitive market are unlikely to be achieved in practice. The Commission agrees with the QCA that competitive markets may differ substantially from textbook definitions of perfect competition. Competition authorities and economic regulators do not rely upon the concept of a perfectly competitive market when assessing the effectiveness of competition. For example, the Australian Energy Market Commission, in assessing the competitiveness of energy retailers operating in the National Electricity Market, relied upon the concept of "effective competition".⁴³

⁴² MCA NT *Comprehensive response to ESCOSA Issues Paper*, February 2015, pp. ii and 5, available at <http://www.escosa.sa.gov.au/library/20150209-Rail-Tarcoola-Darwin10yrReviewIssuesPaperSubmissionComprehensive-MineralsCouncilNTDivision.pdf>

⁴³ Indicators of effective competition used by the AEMC include the following: customers are active in the market; there are no significant barriers to entry, expansion, or exit from the market; there is independent rivalry; customers are satisfied with market outcomes; and suppliers are making profit margins that are consistent with a competitive market. Refer Australian Energy Market Commission, *2014 Retail Competition Review, Final Report*, August 2014, pp.7-8, available at <http://www.aemc.gov.au/getattachment/3fccbed6-ebf8-4edb-86c9-71ff22eced08/Final-report.aspx>

For the purposes of this review, it is relevant to note that the Code provides guidance on assessment of an effective restraint on GWAN's ability to earn monopoly rents. Subsection 3(4) of the Code states:

For the purposes of the pricing principles, an effective constraint will be taken to exist when it is likely that a supplier (or the threat of entry by a potential supplier) of transportation services by a mode other than rail (supplier A) will prevent another supplier of the same or similar transportation services by rail (supplier B) from sustaining prices materially above supplier B's long term efficient costs of supply without offering materially more in return.

Effective competition is characterised by how well the market process promotes the long term interests of consumers. Effective competition requires effective participation by both customers and suppliers. An effectively competitive market will create incentives for firms to continually drive innovation for the long term benefit of consumers and evolve in response to changing consumer demands.⁴⁴ However, markets are dynamic; conditions change as the cost of inputs and technologies change, demand levels vary, and firms enter and exit the market.

Therefore, while there is only one railway network to provide freight services through the Tarcoola-Darwin corridor, the Commission's finding (as explained in detail below) is that, with the exception of bulk freight services, effective competition has been provided in the freight services market during the period of this review by other transport sources, such as road.

Further, there is sufficient evidence to suggest that road transport will continue to provide effective competition for the non-bulk freight services provided by GWAN and that customers will be able to switch between the two transportation modes. The view that rail competes with road on the line-haul segment of long distance non-bulk freight is also supported by the Bureau of Infrastructure, Transport and Regional Economics (BITRE).⁴⁵

The exception to this general position is the transportation of bulk freight (i.e. large quantities of homogeneous product without packaging). The reasons why bulk freight services are not considered to be competitive are discussed in section 2.2.1 below.

⁴⁴ ACCC, *Reinvigorating Australia's Competition Policy: Australian Competition and Consumer Commission submission to the Competition Policy Review*, 25 June 2014, p. 5, available at [http://www.accc.gov.au/system/files/Harper%20Review%20-%20Issues%20Paper%20-%20ACCC%20Submission%20-%20FINAL%20\(for%20website\)%20-%2025%20June%202014%20\(2\).pdf](http://www.accc.gov.au/system/files/Harper%20Review%20-%20Issues%20Paper%20-%20ACCC%20Submission%20-%20FINAL%20(for%20website)%20-%2025%20June%202014%20(2).pdf)

⁴⁵ Bureau of Infrastructure, Transport and Regional Economics, *Road and rail freight: competitors or complements?* Available at https://www.bitre.gov.au/publications/2009/files/is_034.pdf

2.2.1 The test for sustainable competition

The Schedule to the Code contains a series of Pricing Principles that establish the test for identifying whether or not a particular type of freight access service is subject to a sustainable competitive price.⁴⁶ Under the Code, a freight access service must pass two tests, as explained below, in order to be assessed as facing a sustainable competitive price. The tests arise from sections 50(2)(a) and (b) of the Code, reproduced below:

Sustainable competitive prices

(2) A sustainable competitive price will exist in relation to the transportation of a particular type of freight where it can be demonstrated that:

- a) there are no regulatory, technical or other practical impediments to the transport of the freight by a mode of transport other than the railway or combination of such alternative modes; and*
- b) the availability or potential availability of modes of transport other than the railway is an effective constraint on the price of transporting such freight on the railway having regard to the following factors:*
 - (i) the number and size of participants in the market*
 - (ii) the type and volume of freight involved and any unequal backhaul loadings*
 - (iii) whether there are any regulatory, technical or other practical barriers to entry*
 - (iv) the extent of product differentiation in the market, including the differences in the ancillary services and convenience offered by different modes of transport*
 - (v) the dynamic characteristics of the market, including any fluctuations in demand for transportation services.*
 - (vi) the costs and services characteristics of transporting freight by different modes of transport (including the time for delivery of the freight, rail rolling stock or other vehicle axle loadings, length and speed of trains, and any infrastructure upgrade requirements)*
 - (vii) contractual terms (such as duration and frequency of service, whether for a specific volume or at call)*
 - (viii) congestion and bottleneck inefficiencies caused by the constraining points on the road, railway or other relevant infrastructure*
 - (ix) the safety requirements the different modes of transport are required to meet*
 - (x) the direct and indirect costs of environmental impacts of the different modes of transport, and*
 - (xi) any other relevant matters.*

Prior to the commencement of Tarcoola-Darwin Railway operations, all general freight was carried by road. With the Railway operating, such freight can now be carried either by road or by rail. Within this report, general freight for which multiple modes of transportation (e.g. road and rail) can be used to carry containerised loads, is referred to as inter-modal freight. Inter-modal freight includes perishable, fragile and high value goods.

⁴⁶ Refer Code Schedule 1, Division 1, subsection (2).

Due to the distances involved, the most comparable freight route for which data are available is the east-west corridor from the eastern states to Perth. On the east-west line, rail dominates the inter-modal freight market, although road still held a substantial market share in 2006.⁴⁷ While more recent data is not available, GWAN noted that the Tarcoola-Darwin Railway continues to be heavily exposed to competition from road freight in the inter-modal sector.

Consideration of each of the criteria for determining services subject to sustainable competitive prices is discussed in the following sections.

2.2.2 Test 2(a) - Impediments to transporting freight by other means

There are minimal regulatory impediments to the transport of freight by road. The barriers to entry to road freight are low compared with other modes of transport, and road transport continues to dominate most inter-modal routes in Australia, having a greater advantage on shorter routes.⁴⁸ However, despite the long distance of the Tarcoola-Darwin route, road transport continues to operate in competition with the Railway.

In its submission to the Draft Report, MCA-NTD argued that the regulatory and technical impediments to the transport of freight by road are sufficient such that the condition in test 2(a) is not met for any freight task, including inter-modal freight. In particular, MCA-NTD considers that road transport is subject to a number of regulatory impediments which do not apply to rail and that inter-modal freight should also be considered as a service which does not face sustainable competition.⁴⁹ MCA-NTD has cited an extensive list of legislation to support this position, predominantly focused on the safety and registration requirements at both Commonwealth and Territory/State level. In addition, MCA-NTD argued that there are several areas where intermodal freight faces technical impediments in its competition with rail. First among these is the penalties that apply to operators whose vehicles are outside the legislated requirements of size, mass, warning signs, load projection and axle groupings. Finally, MCA-NTD also argued that access to the road network is impeded at times due to impassable incidents and other restrictions, including widespread flooding during the wet season.

It is considered by MCA-NTD that:

“just because road transport is capable of carrying all freight types between Adelaide and Darwin, does not automatically provide validation that road transport can provide road transport [sic], is competitive, or nor is it economically efficient to do so. In addition, unless there are vast technological improvements in the road freight environment, MCA-NTD believes that road will become a competitor of even less significance in transporting freight across vast distances, especially with the advent of heavier regulations, increased congestion, driver shortages, increasing rail competition,

⁴⁷ Productivity Commission, December 2006, p. 13.

⁴⁸ Productivity Commission, 2006, p. 21.

⁴⁹ MCA-NTD page 20

harmonisation of national transport and investment strategies, costs and technical requirements.”⁵⁰

The Commission’s view is that while these regulations and requirements do exist, they are not sufficient to create a regulatory impediment of practical significance. This is demonstrated by the widespread use of road networks for freight tasks, not only along the Tarcoola-Darwin corridor, but throughout Australia.

The Commission also notes that, even if inter-modal freight is included as a service that does not face sustainable competition, it would be necessary to allocate an appropriate share of the Railway infrastructure costs to intermodal freight. The outcome of this Review would not change in that scenario; viz. excessive revenues have not been earned.

There are, however, practical, commercial impediments as outlined below, to the carriage of bulk commodities over long distances using road transport and it is generally accepted that rail does not face sustainable price competition in the transportation of bulk freight.⁵¹

Asciano submitted that it considers that road transport is not a sustainable competitor for long haul mineral trains.⁵² MCA-NTD supported this view, stating that in its view and experience, the nature of the bulk minerals products transported over long distances in the Northern Territory does not support the interpretation that road transport offers a sustainable competitive price to rail transport.⁵³

In providing data for this review, GWAN did not undertake an assessment of whether or not each bulk mineral customer was subject to a sustainable competitive price, instead making a conservative assumption that none of its bulk mineral customers were subject to a sustainable competitive price.

The Commission considers that this approach is appropriate in the context of this review.

Minerals traffic commenced on the Tarcoola-Darwin Railway in 2006, carrying commodities which included iron ore, copper and manganese. Prior to that time, the only traffic was passenger and inter-modal freight. To date, coastal shipping from Adelaide to Darwin has not been utilised to any measurable scale.⁵⁴ Air freight is not a competitor to rail due to the very high comparative cost of freighting heavy products, compared with rail or road.

The Commission’s finding is that bulk freight does not pass the first test (test 2(a)) of facing sustainable competition, and below-rail revenues for bulk freight are therefore included in relevant revenue for the purposes of this review. For the Review Period, revenues from bulk freight were \$136.6m or 36 per cent of total gross revenues from access holders.

⁵⁰ MCA-NTD submission, p. 23.

⁵¹ Productivity Commission, 2006, p. 13.

⁵² Asciano *Submission to ESCOSA Issues Paper, Tarcoola – Darwin Railway – 10-year review of revenues*, available at <http://www.escosa.sa.gov.au/library/20150109-Rail-Tarcoola-Darwin10yrReviewIssuesPaperSubmission-Asciano.pdf>

⁵³ MCA-NTD, p. 4.

⁵⁴ BITRE, 2009, p. 4.

Conversely, test 2(a) does not rule out that Intermodal freight faces sustainable competition. In order to determine whether intermodal freight faces sustainable competition for this review, the tests outlined at Section 50 2(b) of the Code, which follow, must also be satisfied.

2.2.3 Test 2(b) - Availability of other modes of transport as a competitive restraint

As bulk freight does not pass the first test of facing sustainable price competition, and passenger access services are not included within this Review, test 2(b) applies only to inter-modal freight.

The Pricing Principles within the Code outline the criteria for assessing whether or not the availability or potential availability of alternative modes of transport other than the Railway is an effective constraint on the price of transporting such freight on the Railway having regard to a series of factors. Based on the foregoing discussion, the Commission has focussed its analysis on roads being a potential competitive constraint on the Railway. The assessment of these factors follows.

2.2.3.1 The number and size of participants in the market

Road freight is characterised by a large number of participants and is highly competitive. In 2002 it was estimated that there were almost 50,000 road transport businesses in Australia, with small firms comprising approximately 90 per cent of the fleet.⁵⁵ There are many trucking operators offering a service from Adelaide to Darwin.⁵⁶ There is only one rail provider in the Tarcoola to Darwin corridor, so its competition comes only from road transport rather than other Railway operators.

2.2.3.2 The type and volume of freight involved and any unequal backhaul loadings

Competition from road is principally for non-bulk commodities, such as containerised inter-modal freight.⁵⁷ Unequal backhaul loadings are a feature of the Adelaide to Darwin freight corridor, with most freight travelling south to north. For example, in 2007 (the most recent published figures available), road freight from South Australia to the Northern Territory was 290 kilo tonnes (**kt**), but for Northern Territory to South Australia was only 100 kt.⁵⁸ This is common to both road and rail, as shown by the similarity in the share of freight for road and

⁵⁵ Bureau of Transport and Resource Economics (BTRE), 2003. An overview of the Australian road freight transport industry, Working paper 60, p. 43, available at https://www.bitre.gov.au/publications/2003/files/wp_060.pdf accessed 25 February 2015

⁵⁶ For example, see listings under iTruck, available at http://www.itruck.com.au/Companies_Page%20n1%20V1/Companies%20Home%20Page%20n1%20v3_2.html accessed 25 February 2015

⁵⁷ BITRE, 2009, p. 3

⁵⁸ BITRE, 2010, *Road freight estimates and forecasts in Australia, interstate, capital cities and rest of state*, p. 120, available at http://www.bitre.gov.au/publications/2010/files/report_121.pdf accessed 25 February 2015

rail in both directions.⁵⁹ Bulk mineral freight is characterised by its unequal backhaul loadings (i.e. the requirement for the rolling-stock to return empty).

The road freight tonnage from South Australia to the Northern Territory was 292 kt in 2002, just prior to the opening of the Alice Springs to Darwin railway.⁶⁰ While in 2003 it fell to 239 kt, by 2007 it had climbed back to 290 kt, suggesting continued road freight competition.⁶¹

2.2.3.3 Whether there are any regulatory, technical or other practical barriers to entry

There are minimal regulatory, technical or other practical barriers to entry for road transport on the Tarcoola-Darwin transport corridor. Such barriers are limited to licensing, registration, and standards relating to the roadworthiness of vehicles. As discussed previously, these requirements do not create a significant impediment to the use of road networks for freight tasks.

Coastal shipping has some barriers to entry for foreign flagged vessels, such that they cannot deliver freight between Australian ports unless they hold an appropriate licence to do so. The awarding of such a licence occurs only if owners of Australian ships have not been able to make a case that they are in a position to undertake voyages that are proposed to be undertaken by foreign vessels. While not impacting on the current review, such restrictions are proposed to be removed in the future.⁶²

2.2.3.4 The extent of product differentiation in the market, including the differences in the ancillary services and convenience offered by different modes of transport

The main source of product differentiation is the flexibility which can be offered by road transport in comparison to rail. This becomes less important over longer distances as the flexible component of road transport, the pick-up and delivery of freight from door to door, can be economically achieved in conjunction with rail.

2.2.3.5 The dynamic characteristics of the market, including any fluctuations in demand for transportation services

Figures from 1972 to 2008 on the share of freight for road and rail on the Adelaide-Darwin route show fluctuations⁶³ either side of 50 per cent for each mode, which indicates a dynamic market where freight forwarders shifted from one mode to another. There was an expectation that, in the years following 2008, rail would account for between 60 and 65 per cent of freight. Since then the freight market has grown and rail has increased its freight share more than expected. In 2013-14, rail accounted for 90 per cent of all contestable inter-modal freight, carrying a total 886 kt comprising containerised general freight, automotive

⁵⁹ BITRE, 2010, p. 134

⁶⁰ BITRE, 2010, p. 120

⁶¹ Note: more recent data are unavailable.

⁶² Australian Government, *Options Paper: Approaches to regulating coastal shipping in Australia*, April 2014, available at: https://www.infrastructure.gov.au/maritime/business/coastal_shipping/review/files/Options_Paper_Approaches_to_regulating_coastal_shipping_in_Australia.pdf accessed 18 March 2015

⁶³ BITRE, 2010, p. 134.

and specialised products – up 4 per cent on the previous year. Bulk products tonnages were up 7 per cent on the previous year, to 2.74 million tonnes.⁶⁴

The change in these characteristics of the market since 2008 would tend to suggest that the case for road transport providing sustainable competition is diminishing. However, on balance over the Review Period, road freight services are regarded as competitive.

2.2.3.6 The costs and services characteristics of transporting freight by different modes of transport (including the time for delivery of the freight, rail rolling stock or other vehicle axle loadings, length and speed of trains, and any infrastructure upgrade requirements)

Rail becomes more competitive against road as the distance travelled and the weight of the freight increases. The timeframes over the Adelaide to Darwin freight corridor are broadly similar between road and rail. In 2008, the average speed of an inter-modal freight train from Tarcoola to Darwin was 73km/hr including stops, and it made three stops with an average duration of 221 minutes.⁶⁵ Road transport times are similar. While a truck travels at 100km/hr, the driver can only legally drive for a maximum of 12 hours in any 24 hour period, or 72 hours in any 168 hour period.⁶⁶ The impact of these limitations can however, be mitigated in practise, through the utilisation of more than one driver in each vehicle.

A train on the Tarcoola to Darwin line can be up to 1.8 kilometres long⁶⁷ and can be double stacked, which compares to a maximum length of a road train of 53.5 metres.⁶⁸

Road transport is subject to strict axle load limits which are lower than those for rail, limiting road transport's competitiveness for carriage of very heavy loads.⁶⁹ This is not as important a factor for inter-modal freight as it is for bulk freight.

In the absence of Government subsidy, the costs of a railway have to be recovered completely from the clientele, whereas road transport shares costs with other road users. The costs of the highway from South Australia to Northern Territory are not recovered solely from the freight users of that corridor, and are recovered not only from heavy vehicles, but also cars, motorcycles and all other registered vehicles. In 2004-05, heavy vehicles contributed \$1.63 billion to a total Australia-wide road infrastructure expenditure of \$10.4 billion⁷⁰ although the Productivity Commission did not find evidence of overall subsidy

⁶⁴ AustralAsia Railway Corporation, *Annual Report 13-14*, p. 7, available at http://www.aarail.com.au/wp-content/uploads/2014/12/38436_AustralAsia-Annunal-Report-ALL.pdf accessed 31 March, 2015

⁶⁵ BITRE, 2008, *Australian Rail Freight Performance Indicators 2007-08*, p. 34.

⁶⁶ National Transport Commission (Road Transport Legislation – Driving Hours Regulations) Regulations 2006, Section 18, available at <http://www.comlaw.gov.au/Details/F2006L00250>

⁶⁷ BITRE, 2008, p. 12.

⁶⁸ NT Department of Road Transport, *Motor Vehicle Registry Information Bulletin, V13 Vehicle Dimensional Limits (including load)*, p. 4, available at http://www.transport.nt.gov.au/_data/assets/pdf_file/0006/19599/ibv13.pdf accessed 25 February 2015

⁶⁹ National Heavy Vehicle Regulator (NHVR), *National heavy vehicle mass and dimension limits*, February 2014, p. 5, available at <https://www.nhvr.gov.au/files/201402-0116-mass-and-dimension-limits.pdf> accessed 2 March 2014.

⁷⁰ Productivity Commission, 2006, p. 116.

to road transport. However, roads are funded as a network and it is difficult to establish the level of cost recovery of any particular route. Rail is eligible for a fuel tax credit (as track costs are paid for privately) while road transport is not, as a proportion of fuel excise is designated as a road user charge.⁷¹

2.2.3.7 Contractual terms (such as duration and frequency of service, whether for a specific volume or at call)

The inter-modal transport market is generally at call, which means a container can be booked onto a train without the need for a contract. This allows the inter-modal freight forwarder to switch transport modes at short notice.

2.2.3.8 Congestion and bottleneck inefficiencies caused by the constraining points on the road, railway or other relevant infrastructure

Outside of the Adelaide metropolitan area, there are no constraining points on the road system between Adelaide to Darwin.

In relation to rail, however, GWAN has advised that capacity depends on the availability of paths on the network and of equipment (rolling stock).

Pathing is limited by the number of locations trains can pass each other, generally at passing loops. Between Tarcoola and Alice Springs there are 11 passing loops (of which only eight are currently usable). However, between Alice Springs and Darwin there are only four. The limited number of passing loops in the northern half of the Railway has the potential to create limits on capacity.

The availability of rolling stock is driven by the significant capital costs associated with this equipment. Each train requires tens of millions of dollars in capital and the introduction of new services on a 3,000 kilometre haulage task requires a significant amount of new freight to justify the economics of a new investment.

The Commission considers that, given current rates of rail utilisation, neither mode has a substantial advantage over the other in this area.

2.2.3.9 The safety requirements the different modes of transport are required to meet

The road and rail freight industries operate under different environments with some different safety rules. However, both rail and road are subject to the South Australian and Northern Territory Work, Health and Safety regulations that govern the health and safety of employees.

⁷¹ Australian Tax Office, 2014, *Fuel tax credit rates and eligible fuels*, available at <https://www.ato.gov.au/Business/Fuel-schemes/In-detail/Fuel-tax-credits--for-GST-registered-businesses/Calculating-and-record-keeping/Fuel-tax-credit-rates-and-eligible-fuels/> accessed 25 February 2015.

All train drivers are required to obtain a Safe Working accreditation, although there is no train driver licence in Australia at present.⁷² The safety of the rail industry is regulated by the National Law and Regulations, which are stringent.⁷³ Railway operators and infrastructure managers need to be accredited before they can conduct railway transport operations. This requires the rail transport operator to develop and maintain a safety management system which is capable of satisfying the requirements of the national rail safety legislation.

Regulatory oversight of rail safety law in South Australia, NSW, Victoria, Tasmania and NT is conducted by the Office of the National Rail Safety Regulator.

Road transport drivers are required to obtain a relevant licence and are subject to road transport legislation, including vehicle standards regulations. Truck driver licences are issued under a graduated scheme, which means that a driver needs testing and experience before driving the heaviest vehicles.

A report commissioned by the Australasian Railway Association (**ARA**) in 2011 argued that rail is a much safer freight transport option than road.⁷⁴ Its analysis of the cost of accidents showed that road transport incurs a cost of \$0.65 per tonne-kilometre, compared with \$0.06 (in dollars of 2010) per tonne-kilometre for rail. While such accident costs might justify a higher expenditure on safety compliance by the road sector in an attempt to reduce them, in terms of meeting the cost of safety compliance, the Commission has not identified anything to suggest a difference between rail and road transport would prevent effective competition between the two.

2.2.3.10 The direct and indirect costs of environmental impacts of the different modes of transport

Rail has an environmental advantage over road transport, at least as far as energy efficiency and greenhouse gas emissions are concerned. The ARA report⁷⁵ found that road freight emitted seven times the emissions of rail, on the basis of emissions per tonne km travelled. The NSW Transport Department states that transporting freight by rail generates one third of the greenhouse gases produced by road transport as one freight train displaces approximately 150 semi-trailers.⁷⁶ However, in an environment in which greenhouse gas emissions are unpriced, the environmental advantage does not translate to a cost advantage *per se*.

⁷² Transport and Logistics Industry Council Ltd. Train Driver, available at <http://tlisc.org.au/04/2013/train-driver/> accessed 25 February 2015.

⁷³ Rail Safety National Law National Regulations 2012, under the Rail Safety National Law (South Australia) Act 2012, available at <http://www.legislation.sa.gov.au/LZ/C/R/RAIL%20SAFETY%20NATIONAL%20LAW%20NATIONAL%20REGULATIONS%202012/CURRENT/2012.255.UN.PDF> accessed 25 February 2015.

⁷⁴ The Australasian Railway Association, 2011, *The true value of rail*, p. 42, available at <http://www2.deloitte.com/content/dam/Deloitte/au/Documents/public-sector/deloitte-au-ps-true-value-rail-170914.pdf> accessed 25 February 2015.

⁷⁵ ARA, 2011, p. 40.

⁷⁶ NSW Government Transport for NSW, *Northern Sydney freight corridor program*, project page, available at <http://www.transport.nsw.gov.au/projects-northern-sydney-freight-corridor-program> accessed 18 March 2015.

Other environmental impacts that are larger for road than for rail freight include noise, pollution and degraded amenity impacts that intrude on local communities and other road users.⁷⁷ These impacts are, however, difficult to measure and, therefore, do not translate to a cost advantage for rail over road.

2.2.3.11 Any other relevant matters

The Commission does not consider that there are any other relevant matters.

2.2.4 Conclusion

The Commission's finding is that inter-modal freight transportation passes both of the tests required in order to be assessed as being subject to sustainable competition. Bulk freight transportation, however, is not commercially practical over long distances by any means other than by rail. Accordingly the relevant revenue for the purpose of this review is the below-rail revenue generated by the Access Providers in respect of bulk freight transportation.

The relevant revenues for the purpose of this review are \$136.6m as set out in Table 2.1.

⁷⁷ Productivity Commission, 2006, p. XXXIV

3. DETERMINING RELEVANT COSTS

The Commission's finding is that over the period of this Review, relevant costs fall within the range of \$197.2m to \$408.9m, comprising:

- ▲ **avoidable costs of \$40.8m to \$41.4m, and**
- ▲ **a reasonable contribution to fixed costs (including depreciation) of \$156.4m to \$367.5m.**

3.1 *Relevant costs*

Once the relevant revenues have been determined, the relevant costs must be determined and subtracted. The relevant costs comprise:

- ▲ the avoidable costs attributable to the usage of the relevant required railway infrastructure by all other access holders, and
- ▲ a reasonable contribution to fixed costs of the relevant required railway infrastructure from all other access holders using it, including a return on capital and a return of capital (depreciation).

3.2 *Avoidable costs*

The Code defines avoidable costs as the costs attributable to the usage of the required Railway infrastructure by all other access holders. Avoidable costs include variable costs associated with that usage, such as operating costs and new capital expenditure, which are directly attributable to the provision of access to the access seeker.

GWAN provided information in relation to annual operating costs and new capital expenditure during the Review Period. That information forms the basis for the Commission's estimate of avoidable costs.

Avoidable costs incurred to earn revenue from non-sustainable customers (customers for which no sustainable alternative transport modes exist) comprise a proportion of operating costs and new capital spending. The proportions applied depend upon the allocation methodology selected. While multiple cost allocation methodologies might be available, the three methodologies put forward by GWAN (and reviewed by KPMG⁷⁸) are outlined in section 3.4.

⁷⁸ The cost allocation review is discussed further in Section 3.4

3.3 Reasonable contribution to fixed costs

As all of the operating costs and the return on and of new capital expenditure incurred by the Access Providers is included within avoidable costs, the only remaining fixed costs to be incorporated into the excessive revenue test relates to the return on and of the existing asset base of the Access Providers. A cost allocation methodology is required in order to determine the quantum of the “reasonable contribution”.

3.4 Allocation of costs

The cost information provided by GWAN is not directly separated between competitive and non-competitive sources. GWAN has advised that it manages the Railway on a “whole of line” basis and where track is maintained, that maintenance benefits all users of the network. Therefore, a method of allocating total operating and capital costs between competitive and non-competitive services is required.

The objective of this process is to allocate costs based on the drivers of those costs. These drivers may be based on the type of customer and the costs specific to them, or the extent of Railway usage, or a combination of the two.

There are several potential methods of cost allocation that could be used. Some are location drivers, and some require the separation of rail segments on the basis of physical location. These methodologies are not relevant to this review, as the Tarcoola-Darwin Railway is to be considered in its entirety and is not divided into segments.

For this review, the Commission has considered the three cost allocation methods proposed by GWAN. Those are:

- ▲ Cost allocation on the basis of revenues (looking at the proportion of revenues earned by each category of customer and matching these with an equal proportion of costs)
- ▲ Allocation on the basis of estimated cost drivers (a mix of train movements, Train-kilometres, and thousands of gross tonne-kilometres (**KGTKs**)), and
- ▲ Allocating costs between those customers that are subject to a sustainable competitive price and those that are not on the basis of a commonly accepted and available usage measure, in this case KGTKs.

The results of the three methods are presented in Table 3-1 below. Note that revenue from non-sustainable customers did not commence until 2006.

Table 3-1: Proportion of total costs applying to customers not facing a sustainable competitive price, from three commonly applied cost allocation methodologies

	COST ALLOCATION METHOD BASED ON REVENUES	"COST DRIVERS" COST ALLOCATION METHOD	KGTK COST ALLOCATION METHOD
FY 2004	0%	0%	0%
FY 2005	0%	0%	0%
FY 2006	2%	2%	2%
FY 2007	18%	16%	15%
FY 2008	28%	24%	24%
FY 2009	37%	28%	26%
FY 2010	50%	45%	44%
FY 2011	53%	44%	43%
FY 2012	56%	43%	43%
FY 2013	56%	41%	43%

Table 3-1 shows that, compared to the other two methods, the cost allocation method which is based on revenues allocates the largest proportion of costs to customers not facing sustainable competitive prices.

The Commission acknowledges the importance of ensuring that GWAN’s costs for providing railway infrastructure services are appropriately allocated between its above-rail operations and its below-rail infrastructure services, noting that Section 5 of Rail Industry (Tarcoola-Darwin) Guideline No. 3 sets out GWAN’s obligations around allocation of “common costs” between above-rail and below-rail businesses. That allocation provides an important basis for this review and for the determination of access prices by an arbitrator in the event of a dispute.

As foreshadowed in the Draft Report, the Commission engaged KPMG to review the basis of cost allocations undertaken by GWAN (and its sister company, Genesee & Wyoming Australia Pty Ltd) and the consistency of these cost allocations with various cost allocation best practice principles.⁷⁹ KPMG did not find any evidence to suggest that the allocation of costs between the above-rail and below-rail businesses of GWAN are inconsistent with those principles. Furthermore, KPMG did not identify any rationale for selecting different cost allocation bases to those upon which the Commission relied upon in the Draft Report. The Commission accepts that advice.

⁷⁹ Essential Services Commission of SA, Review of GWA financial allocations, July 2015, available at http://www.escosa.sa.gov.au/library/20150714-SARail_TarcoolaDarwinRailReview-GWAFinancialAllocations-KPMGReport.pdf

3.4.1 Allocating costs using revenues

The first methodology used to allocate costs to those customers that are not subject to a sustainable competitive price is to match the proportion of total revenue contributed by such customers to the corresponding proportion of capital and operating costs (dominated by the asset base).

This approach has the shortcoming that it simply allocates more costs (mainly asset base) to customers where revenues are higher. The approach implicitly assumes that the profit margins generated by passenger services, bulk freight and inter-modal freight are equal. It is possible that those customers who contribute most revenue may not incur most of the costs.

On the basis that it is of fundamental importance to differentiate the revenues and costs associated with the competitive and non-competitive businesses of the Access Providers, the Commission's finding is that the revenue-based approach to cost allocation is inappropriate for the purpose of this review.

3.4.2 Allocating costs using estimated cost drivers

In this approach, each cost category is examined with reference to the relevant cost drivers for each cost. Customers that are responsible for higher costs are allocated those higher costs. The methodology recognises that some costs, such as signalling, are dependent upon the length of line used (train-kilometres) and frequency of use (train movements) rather than the load.

GWAN provided an estimated cost allocation methodology as follows.

Table 3-2: Cost allocation methodology applied to specific line items reported in the GWAN regulatory accounts under the "cost drivers" methodology

EXPENSE LINE ITEM	COST ALLOCATION METHODOLOGY USED
Regulatory Depreciation	100% KGTK
Linehaul & Operating Costs	50% KGTK and 50% Train-kilometres
Linehaul Costs	50% KGTK and 50% Train-kilometres
Track Maintenance	50% KGTK and 50% Train-kilometres
Administration Costs	50% KGTK and 50% Train Movements
Contracts and Consultants	50% KGTK and 50% Train Movements
Employee Benefits Expense	50% KGTK and 50% Train Movements
General & Administration costs	50% KGTK and 50% Train Movements
Insurance	50% KGTK and 50% Train Movements
Marketing and Administration	50% KGTK and 50% Train Movements

EXPENSE LINE ITEM	COST ALLOCATION METHODOLOGY USED
Marketing Cost	50% KGTK and 50% Train Movements
Non-Operating Costs	50% KGTK and 50% Train Movements
Non-Operating Costs - Revision 2006	50% KGTK and 50% Train Movements
Other expenses	50% KGTK and 50% Train Movements
Other Operating Costs	50% KGTK and 50% Train Movements
Outside Services	50% KGTK and 50% Train Movements
Project Costs	50% KGTK and 50% Train Movements
Regulatory Cost of Capital	50% KGTK and 50% Train Movements
Staff Costs	50% KGTK and 50% Train Movements
Travel & Entertainment Costs	50% KGTK and 50% Train Movements

Regulatory depreciation was the only cost item which was 100 per cent allocated to KGTK (on the basis that deterioration of the track is a function of the weight carried on it, rather frequency of train movements). Otherwise, the cost items were allocated equally between KGTK and train movements or train-kilometres.

GWAN's information systems have been built around a 'whole of line' approach to the operation of the Railway, and therefore precise figures to populate the table above are not available. GWAN submitted the estimated figures based on its best estimate, supported by RBB Economics. The cost drivers used in Table 3-2 generate the percentages (cost driver allocation methodology) that appear in Table 3-1.

The Commission considers the cost drivers methodology to be reasonable and accepts it for the purpose of this review.

3.4.3 Allocating costs using KGTKs

GWAN also presented a cost allocation method that is based solely on KGTKs – a commonly accepted driver of rail costs.⁸⁰ This resulted in the allocations shown in the last column of Table 3-1, which were then applied to the capital and operating costs for all customers to determine the costs attributed to customers for which no sustainable competitive price exists.

Because of the large weight associated with bulk freight, KGTK-based cost allocations have the potential to over-allocate costs to bulk freight users. This issue is offset on the Tarcoola-Darwin Railway due to the fact that bulk freight customers, unlike inter-modal and

⁸⁰ For example, ESC Vic, *V-Line access arrangement*, Final Decision, June 2012, p. 30, available at <http://www.esc.vic.gov.au/getattachment/0e5205f7-1572-4d0c-8f75-b91b21d3d019/V-Line-Access-Arrangement-Assessment-Final-Decisio.pdf> accessed 26 February 2015.

passenger customers, do not use the entire length of the line, yet the costs relate to the entire line.

The Commission considers the KTGK cost allocation methodology to be reasonable and accepts it for the purpose of this review.

3.5 *Operating costs*

GWAN has provided annual operating cost information for the Review Period, which totals \$146.3m (\$125.6m in nominal terms).

It is generally standard practice for regulators to scrutinise historic operating costs for prudence and efficiency, when preparing determinations of revenues and/or prices. While a similar practice would ordinarily be followed for a review of this nature, the Commission recognises that any combination of avoidable costs will not change the outcome of this Review. As the costs outweigh the benefits, the Commission has not reviewed the avoidable costs for prudence or efficiency.

If, in subsequent reviews, there is a risk that excessive revenues have been generated, the Commission will require and request more detailed cost information from the access providers.

3.6 *Capital costs*

In determining whether the relevant revenues paid or payable by the relevant access holders for railway infrastructure services are excessive, the Commission must have regard to the costs associated with the required railway infrastructure required by the relevant access holders. This must include an appropriate commercial return on (and depreciation of) the required railway infrastructure used by the relevant access holders.

The capital costs of the asset base that existed at the commencement of the Review Period are required to be calculated separately to the capital costs associated with new capital expenditure. The latter is included within avoidable costs, to which a reasonable contribution of the former is aggregated under the Code.

3.6.1 *The asset base*

Given the capital intensive nature of railway infrastructure services, the value of the asset that is used to provide relevant services forms a substantial input into the calculation of relevant costs.

As discussed previously, the access regime encourages commercial negotiation of access prices, providing for arbitration should any access disputes arise. The Code establishes principles that an arbitrator must take into account in determining an arbitrated price, including principles for calculating a floor and ceiling price. The floor price reflects the avoidable costs of providing access and the ceiling price reflects the standalone costs of

providing access. The major difference between these two approaches relates to the allocation of fixed costs, largely the cost of the existing asset base.

For the purposes of determining relevant costs for this review, there is likely to be a range of reasonable asset values, given that the Code specifically provides for access prices and revenues being based on asset values that lie anywhere between the avoidable and stand-alone cost of supply.

The Commission has determined a range of asset values for this purpose. The range relates to the entire Railway; the allocation of those values to the relevant services is discussed in section 3.4.

3.6.1.1 Lower bound asset value

The avoidable cost approach involves only the allocation of incremental costs incurred by the access providers as a result of access; it does not provide for any allocation of historical capital costs. Under that approach, the existing asset base is not reflected in prices.

While that approach may form a reasonable lower bound for access *prices*, it is not a reasonable lower bound for determining *relevant costs* for this review, as it would be prudent and efficient for the Railway operator to recover its fixed capital costs across *all* users, even if some *individual* prices are based on avoidable costs only.

The Commission considers that the following approach is appropriate for determining the lower-bound asset value for this review:

- ▲ Consistent with the requirements of the Pricing Principles as set out in the Code, the value of the Railway should reflect the DORC for those assets.
- ▲ The initial DORC value should exclude the value of contributed assets. This approach is consistent with general regulatory practice and the Commission's Rail Industry Guideline No. 1.
- ▲ The initial DORC value, exclusive of contributed assets, should be rolled forward to include new capital additions, disposals, depreciation, and inflation adjustments. This approach is consistent with general regulatory practice and the Commission's Rail Industry Guideline No. 1.

Under this approach, the initial asset value reflects the written down value of private capital invested in the Railway. That value is \$992.2m and is calculated as follows:

- ▲ the initial DORC value of the Railway, which was \$2,301.4m, *less*
- ▲ the value of the Existing Railway of \$729.4m in dollars of December 2014, *less*
- ▲ the value of the Government funded construction of certain parts of the New Railway (\$579.8 million).

Although GWAN purchased the Railway in 2010 for \$334m (nominal), this value was not adopted as the lower bound regulatory asset base for this review, as the Railway Guidelines

to the Code specify that the asset base should be valued using the DORC methodology. In any case, to adopt GWA's purchase price for a retrospective review that covers a period beginning in January 2004 would not be appropriate. Additionally, the price GWA paid in 2010 reflected a regulatory regime which had committed to a DORC-based value in the event of any access pricing disputes, and for setting ceiling prices.

3.6.1.2 Upper bound asset value

The major point of consideration in calculating the upper bound asset value is whether to include the value of contributed assets, rather than to solely reflect the value of private capital invested.

Under the Pricing Principles, the ceiling price reflects the standalone cost of supply. As stated by the Commission previously:

This 'value of the Railway' is the value of all associated railway infrastructure assets – whether funded by APT or by Government contributions and donations. This is because the ceiling price reflects the stand alone, or bypass, cost of the Railway.⁸¹

As it is possible for relevant revenues to be based on access prices that have been negotiated up to the ceiling price, it is reasonable for this review to adopt an upper bound asset value that reflects the standalone cost of the Railway.

The submission to the Draft Report from MCA-NTD suggests that Government contributions should be excluded from the DORC, noting that capital contributions and gifted assets are typically excluded from regulated asset values.⁸² While the value contributed by Governments is excluded in the lower bound asset value (refer to section 3.6.1.1 above) the Commission has previously determined that in relation to the ceiling price, the value of **all** associated railway infrastructure assets (regardless of how funded) must be taken into consideration.

MCA-NTD also submitted that the DORC valuation should have been revisited, taking into account a current condition-based assessment of the Tarcoola-Darwin Railway.⁸³ The 2005 Valuation was undertaken by Booz, for regulatory purposes, during the first year of the Tarcoola-Darwin Railway operations. There is no reason to doubt the integrity of the valuation undertaken at that time.

The Commission also considered the issue of re-estimating the DORC valuation as opposed to adopting a DORC roll forward methodology in its review of the Guidelines in 2008.⁸⁴ It

⁸¹ Essential Services Commission of South Australia, *AustralAsia Railway Third Party Access Code: Guideline Review Final Decision*, September 2008, p.9, available at <http://www.escosa.sa.gov.au/library/080811-AustralAsiaRailGuidelineReview.pdf>.

⁸² MCA-NTD submission to the Draft Report, page 28

⁸³ MCA-NTD, Submission to the 2015 Draft Report of the Tarcoola-Darwin Railway: 10 year review, June 2015, available at <http://www.escosa.sa.gov.au/library/20150609-Rail-Tarcoola-Darwin-TenYearReviewOfRevenues-DraftReportSubmission-MCA.pdf>

⁸⁴ Essential Services Commission of SA, *AustralAsia Railway (Third Party Access) Code: Guideline Review, Final Decision*, September 2008, available at <http://www.escosa.sa.gov.au/library/080811-AustralAsiaRailGuidelineReview.pdf>.

found no commercial justification for requiring the DORC valuation to be re-assessed on a periodic basis and reaffirmed its draft decision to implement an annual roll forward of the value of the Railway.

MCA-NTD stated that the initial value of capital to be returned, as calculated by the DORC valuation, should be revisited, and should be based upon a condition-based assessment of the asset.⁸⁵

However, the Commission will not revisit the DORC for the following reasons.

- ▲ The revenue review is backward looking, with the DORC methodology to be applied clearly set out in the Guidelines. Investments have been made within the framework of the Code and the Guidelines and it would not be appropriate to change them ex-post as they relate to this Review. Regulated entities have a right to expect regulatory consistency if they are to have the confidence to make investments. This principle is generally adopted by the Commission, unless there is sufficient evidence to warrant a change. The Commission has not been presented with sufficient evidence in this case.
- ▲ The Commission has previously considered this issue in the review of the Guidelines in 2008, and decided to adopt the roll-forward approach rather than a DORC revaluation.⁸⁶
- ▲ The process of revisiting the DORC is costly, yet unlikely to change the outcome of this Review. Any revision to the DORC would also result in an adjustment to the allowed depreciation, which would have an offsetting impact on the total capital costs.

The appropriate level of ongoing investment to maintain the Railway should be driven by the requirement of the Access Providers to maintain the level of service standard quality outlined in Guideline 1 under the Code.⁸⁷ The Commission has not received or found any evidence that required maintenance has not occurred.

The Commission has therefore not undertaken a new DORC valuation to determine standalone costs. Rather, it has adopted the following approach:

- ▲ The initial DORC value has been rolled forward to include new capital additions, disposals, depreciation, and inflation adjustments, consistent with the lower bound approach.

⁸⁵ MCA-NTD submission to the Draft Report, page 26.

⁸⁶ Essential Services Commission of SA, *Rail Industry (Tarcoola-Darwin) Guideline No. 2: Arbitrator pricing requirements*, September 2008, available at <http://www.escosa.sa.gov.au/library/080818-TarcoolaArbitratorPricingRequirements-GuidelineNo2.pdf>.

⁸⁷ ESCOSA, *Rail Industry (Tarcoola-Darwin) Guideline No. 1, Access Provider Reference Pricing and Service Policies*, February 2004, available at http://www.escosa.sa.gov.au/library/040213-Tarcoola-DarwinRailGuidelineNo_1-AccessProviderReferencePricing_ServicePolicies.pdf

- ▲ The Commission has not removed the value of contributed assets, consistent with the approach used for calculated ceiling prices.

Under that approach, the upper bound initial asset value is calculated as \$2,301.4m.

3.6.2 Return of capital

Depreciation is calculated using a straight line method and a 50-year asset life. A straight-line approach is considered reasonable, given the long-term characteristics of below-rail assets, and is a standard practice for the accounting depreciation of long term assets. The assumed 50-year asset life aligns with the life of the Concession Deed.

For this review the Commission has commenced the depreciation calculation on the commencement date of the Review Period and rolled forward the asset value at the end of each financial year. New capital expenditure is depreciated on the basis that it was spent evenly throughout the financial year in which it was incurred.

3.6.3 Return on capital

Rather than determine a specific rate of return to apply to GWAN's capital assets, the Commission has used a range approach based upon reasonable values.

The Code specifies that the appropriate rate of return to be used for this review should reflect the expected risks prevailing as at the date of commencement of construction of the railway by the access providers and relevant financial market rates prevailing at the time of the review.⁸⁸ Accordingly, comparisons are drawn from recent regulatory rail decisions in Australia. These have not been normalised nor adjusted to reflect the specific requirements under the Code. The range approach accepts that there is no single correct answer to the rate of return, and that a range of values can be considered reasonable.

Recent regulatory outcomes are shown in Table 3-3.

⁸⁸ The Code, Section 50 (5) (ii)

Table 3-3: Recent regulated rail WACC decisions in Australia

REGULATOR	DECISION	WACC	ORIGINAL BASIS	REAL PRE-TAX EQUIVALENT ⁸⁹
ERA WA	Review of the Method for estimating the Weighted Average Cost of Capital for the Regulated Railway Networks – Revised Draft Decision 28 Nov 2014	Brookfield Rail: 8.02%	Real Pre-tax for annuity calculations	8.02%
		Pilbara Infrastructure: 13.30%		13.3%
ACCC	Final Decision Australian Rail Track Corporation Access Undertaking – Interstate Rail Network – July 2008	11.76%	Post-tax nominal	10.24%
ESCV	V/Line Access Arrangement – Final Decision – June 2012	6.02%	Real post-tax	6.87%
ACCC	Australian Competition and Consumer Commission Decision In relation to Australian Rail Track Corporation’s Hunter Valley Rail Network Undertaking – 29 June 2011	8.57%	Real Pre-tax	8.57%
QCA	Final Decision QR Networks 2010 DAU – September 2010	9.96%	Post-tax	8.05%
QCA	Aurizon 2014 Draft Access Undertaking – Draft Decision Volume IV – Definitions, Interpretations, Glossary and Reference list – January 2015	7.17%	Post-tax nominal	5.25%

If it had been necessary to calculate a specific WACC for the Tarcoola-Darwin Railway, the Code requires that it reflects a risk premium based upon the expected risks prevailing at the date of capital expenditure.⁹⁰ Therefore, when contemplating the risks of the Railway at its inception (when the bulk of expenditure occurred), it is reasonable to expect that, should a

specific WACC have been required, it would have been towards or beyond the upper end of this range. Therefore, the rate of return encompasses construction risk as well as operating risk, and is additional to the risks reflected in any of the comparable recent regulatory decisions. The highest WACC in the range, the Pilbara Infrastructure, differs from the Tarcoola-Darwin Railway in that it was built to serve identified customers, although there is little diversity in its customer base.

For the purposes of this review, GWAN provided a post-tax WACC range, depending upon the year, of 12.9 to 16.6 per cent on the basis of the risks prevailing at the time of capital expenditure. These risks include higher exposure to systematic risk, particularly in the bulk freight business due to the fact that the customer base consists of small miners with low margins, and therefore more likely to shut down when the economic cycle becomes more challenging.

At the lower end of the range, V-Line faces lower risks as its access arrangements relate largely to low-risk passenger rail services, and has a diversity of below-rail freight access agreements.⁹¹ Similarly, the QCA's 2014 Draft Decision on the rate of return for Aurizon reflected a stable, low risk business, which is unlike the scenario which was faced by the developers of the Tarcoola – Darwin Railway.⁹²

Notwithstanding:

- ▲ the range of regulatory rates of return identified above, and
- ▲ the likelihood that if a commercial rate of return was to be estimated for the Railway that incorporated the risks that existed at the time of commencement of its construction, that rate of return would be at or exceed the higher end of the comparable range

for the purposes of initial testing of relevant revenue outcomes, the Commission has adopted a pre-tax, real rate of return of 5.25 per cent as the lower bound of a reasonable range, as per Table 3.3.

In doing so, it recognises that the commercial rate of return (i.e., that used for pricing purposes) contemplated under clause 50(5)(c) of the Code is likely to be higher than the lower bound. However, the rationale for the selection of a comparatively low commercial rate of return is that, if excessive revenues are not evident at this point, they will not be evident anywhere within or above the reasonable range, including at the point estimate of the commercial rate of return (wherever that may lie). A complete assessment as to the appropriate WACC to apply, accounting for the risks that prevailed at the time of

⁸⁹ The adjustment to pre-tax real was made with reference to the WACC calculation methodologies utilised by the relevant Regulators.

⁹⁰ Refer subsection 50(5)(c)(i)(A) of the Code.

⁹¹ ESC Vic, 2012, p. 20.

⁹² QCA Draft Decision, *Aurizon Network 2014 Draft Access Undertaking – Maximum allowable revenue*, September 2014, page 185, available at <http://www.qca.org.au/getattachment/9e1f80ed-7c00-446d-8043-bf6a3c1d8f22/QCA-Draft-decision.aspx>

commencement of the construction of the Railway, is a complex and costly exercise which will not have a bearing on the outcome of this review.

3.6.4 Total capital costs

The total capital costs represent the sum of the return of capital (depreciation) and the return on capital. Total capital costs for the Review Period for all customers is summarised in Table 3-4 below.

Table 3-4: Total capital cost, assuming a range of regulatory asset base values, 5.25% pre-tax real rate of return (\$m December 2014)

	LOWER BOUND BASE ASSET VALUE	UPPER BOUND BASE ASSET VALUE
Base Asset DORC at 15 January 2004	992.2	2,301.4
Return of capital over Review Period	187.7	435.3
Base Asset DORC at 30 June 2013	804.5	1,866.0
Return on Base Assets over Review Period	446.1	1,034.7
Total Base Asset Capital Costs	633.8	1,470.0
New Asset DORC at 15 January 2004	0.0	0.0
New Asset capital expenditure	25.5	25.5
Return of capital over Review Period	2.0	2.0
New Asset DORC at 30 June 2013	23.5	23.5
Return on New Assets over Review Period	4.3	4.3
Total New Asset Capital Costs	6.3	6.3

3.7 Summary of costs

Table 3-5 summarises the avoidable costs and the reasonable contribution to fixed costs that the Commission finds appropriate to deduct from relevant revenues in order to determine whether excessive revenues were generated by the Access Providers during the Review Period.

Table 3-5: Summary of costs (\$m December 2014)

	LOW PARAMETERS	HIGH PARAMETERS
Avoidable costs before allocation		
Operating costs	146.3	
New capital costs	6.3	
Total avoidable costs before allocation	152.6	
Avoidable costs – “Cost Drivers” allocation	41.4	
Avoidable costs – KGTK allocation	40.8	
Avoidable cost - range	Low: 40.8	High: 41.4
Fixed costs before allocation	633.8	1,470.0
Reasonable contribution to fixed costs – “Cost Drivers” allocation	158.5	367.5
Reasonable contribution to fixed costs – KGTK allocation	156.4	362.7
Reasonable contribution to fixed costs - range	Low: 156.4	High: 367.5

The choice between the two appropriate cost allocation methodologies has little bearing on the total cost allocated to below-rail services for bulk freight. The selection of the most appropriate base asset opening DORC value is far more significant, and drives the range of the fixed cost contribution values above.

4. HAVE EXCESSIVE REVENUES BEEN EARNED?

The Commission's finding is that excessive access revenues have not been earned in respect of non-competitive infrastructure services provided on the Tarcoola-Darwin Railway for the period from 15 January 2004 to 30 June 2013.

Based on the assessment set out in Chapter 3, the Commission's finding is that excessive revenues were **not** earned on the Tarcoola-Darwin Railway during the Review Period. This conclusion remains unchanged, irrespective of the RAB value that is selected within the range, or the cost allocation method that is used, and remains true notwithstanding the selection of an arbitrarily low commercial rate of return. A higher rate of return would merely produce higher "headroom" or excess of costs against revenue generated.

The aggregate of avoidable costs and the contribution to fixed costs is higher than the relevant revenue, as shown in Table 4-1 below.

Table 4-1: Summary of relevant revenues and costs (\$m December 2014)

	AVOIDABLE COSTS	CONTRIBUTION TO FIXED COSTS	TOTAL COSTS	RELEVANT REVENUE	EXTENT TO WHICH REVENUES UNDER RECOVER COSTS
Revenue cost allocation method	n/a	n/a	n/a	136.6	n/a
"Cost Drivers" cost allocation method	41.4	158.5 - 367.5	199.9 - 408.9	136.6	63.3 - 272.4
KGTK cost allocation method	40.8	156.4 - 362.7	197.2 - 403.6	136.6	60.7 - 267.0

In comparison to the fixed capital costs, the avoidable costs are relatively minor. Table 4-1 demonstrates that a closer scrutiny of operating costs or new capital expenditure would have little bearing on the total cost structure or the outcome of this review.

5. NEXT STEPS

This release of this Final Report marks the conclusion of the first review for excessive revenues in relation to the non-competitive below rail infrastructure services provided by the Access Providers on the Tarcoola to Darwin Railway. Unless the Code is amended, the Commission will undertake its second review for excessive revenues following the completion of the next five-year period ending 30 June 2018.

Many of the submissions made in relation to this review expressed concerns about the operation of the third party access regime itself. As outlined throughout this report, this review is not the right vehicle to address these broader regulatory concerns. These matters are relevant to any subsequent review of the Act by Governments. However, to the extent that the Commission can address some of these concerns through its Guidelines, it will undertake a further review of the Guidelines prior to the next regulatory review of revenues.

The operation of the third party access regime (including the scope of regulatory reviews) is legislated in the Act. To the extent the third party access regime does not meet the reasonable expectations of interested parties, these concerns ought to be raised with the relevant legislators, in this case being the Commonwealth, South Australian and Northern Territory governments.



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