

**AU1 West Moreton
Reference Tariff Reset
Overall Submission
(Public Release)**

 QueenslandRail



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1 Executive Summary

The access undertaking currently applicable to Queensland Rail's network is due to expire on 31 December 2013. A replacement access undertaking, titled 'Queensland Rail's Draft Access Undertaking 1' (AU1) has been developed and submitted to the Queensland Competition Authority (QCA) for its approval. As part of AU1¹, Queensland Rail has undertaken to submit a review of the West Moreton reference tariff to the QCA for its consideration by 30 June 2013 (or such longer time as agreed with the QCA).

Developing an appropriate reference tariff methodology for the West Moreton System is challenging as coal carrying train services share the system with non-coal traffics and are required to travel through the Brisbane Metropolitan Region to the Port of Brisbane (Fisherman Islands). Despite this, paying due consideration to past QCA positions, Queensland Rail has developed a reference tariff proposal that adds Columboola as a nominated loading facility and provides a transparent and repeatable methodology that can be rolled forward into future regulatory periods.

In order to progress the development of the reference tariff, Queensland Rail has utilised a methodology that in the most part is consistent with the QCA's past views regarding:

- Building blocks approach;
- Depreciated Optimised Replacement Cost (DORC) valuation;
- Common network valuation with a train path allocation percentage applied;
- Asset lives and indexation;
- Weighted Average Cost of Capital (WACC) methodology; and
- Two-part tariff structure.

This being said Queensland Rail has proposed two adjustments to the QCA's DORC valuation and further train path allocation percentage categories to take into account projects either funded by end-users or undertaken specifically to enable coal traffic. In addition to this, Queensland Rail has developed a capital and maintenance program for the period for which the reference tariff will apply and recalculated an appropriate allowance for other operating costs.

While coal carrying train services originating in the West Moreton System are required to travel through the Brisbane Metropolitan Region to reach the Port of Brisbane, Queensland Rail is intending to apply the tariff derived from Rosewood to Columboola building blocks to the entire route taken by these services. Additionally, similar to past QR Network access undertakings, it is proposed that coal carrying train services originating from Ebenezer (solely in the Brisbane Metropolitan Region) have the same reference tariff as West Moreton System services applied.

Given recent movements in the WACC and an increase in contracted volumes one on the surface would expect a reduction in the proposed tariff relative to the one currently in place. This however is not the case as there have been amendments to, and movements in, other building block parameters that have had the opposite effect. Utilising the methodology and building block inputs outlined in this submission, Queensland Rail has determined a reference tariff of \$22.22 per 000 GTKs to be applicable from 1 July 2013.

The \$22.22 per 000 GTKs converts to a two-part tariff for coal carrying train services originating in the West Moreton System of:

- \$11.11 per 000 GTKs (AT1 a volume and distance based charge); and
- \$5,449.78 per train path (AT2 a capacity based charge).

¹ Clause 3.4.2 of AU1.

For Ebenezer coal carrying train services the reference tariff is proposed to remain a one-part tariff levied at \$22.22 per 000 GTKs.

2 Introduction

2.1 Background

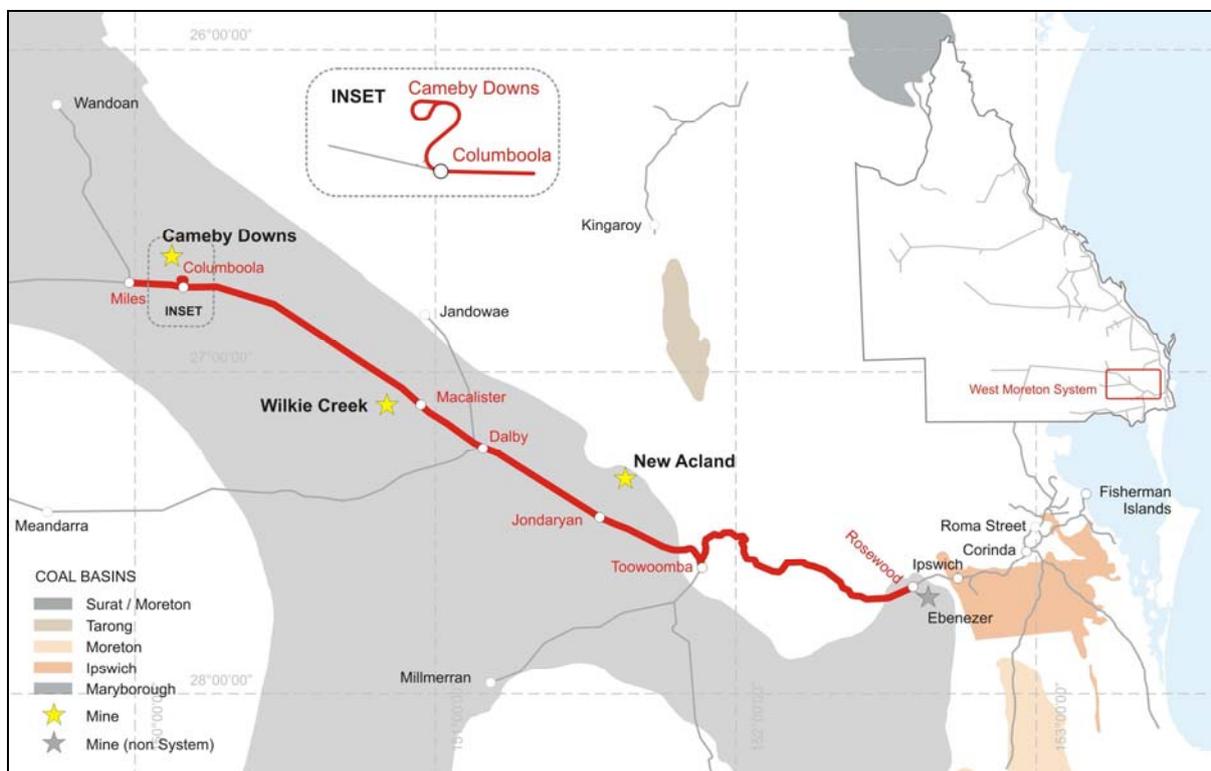
The current access undertaking, titled 'QR Network's Access Undertaking (2008) June 2010' (Temporary Undertaking), was assigned to Queensland Rail via a Transfer Notice on 1 July 2010 as part of the separation of QR Limited into Aurizon (formerly QR National) and Queensland Rail.

Queensland Rail has drafted its own access undertaking, titled 'Queensland Rail's Access Undertaking 1' (AU1), which is currently being considered by the Queensland Competition Authority (QCA). As part of the development of AU1², Queensland Rail has undertaken to develop a reference tariff for coal carrying train services in the West Moreton System based on a building blocks approach. The reference tariff developed will "reset" the existing reference tariff that has applied under the Temporary Undertaking and is proposed to apply from 1 July 2013 to 30 June 2017.

2.1.1 History & Characteristics

The West Moreton System spans 314km from Rosewood to Miles and connects Surat Basin coal mines (as far west as Columboola) with the Port of Brisbane (Fisherman Islands).

Below is a map of the West Moreton System:



² Clause 3.4.2 of AU1.

Historically the system catered for passenger, livestock, freight and agricultural products (e.g. grain and cotton) with the first section of railway line in Queensland, between Ipswich and Grandchester, opening in 1865.

While coal carrying train services commenced in 1982 from mines located just west of Ipswich (Brisbane Metropolitan Region), raiing of coal from the Wilkie Creek mine began in 1994, with Macalister as the loading point. Following the development of the New Acland mine, railings from Jondaryan commenced in 2002. The final Surat Basin mine utilising the West Moreton System, Cameby Downs, began operations in late 2010 with train services transporting coal from Columboola.

As the system was initially designed to cater for non-coal traffics, investment in infrastructure improvements, by both Queensland Rail and West Moreton System end-users, has been necessary to accommodate coal carrying train services. Being built on a black soil plain and having tight radius curves down the Toowoomba and Little Liverpool Ranges has created additional challenges.

2.1.2 Existing Reference Tariff

The existing reference tariff applicable under the Temporary Undertaking is \$16.81 per 000 GTKs (\$2009/10); however the Access Undertaking currently in place only lists Macalister, Jondaryan and Ebenezer (located in the Brisbane Metropolitan Region) as nominated loading facilities. Despite this coal carrying train services from Columboola are contracted at an access charge equivalent to the reference tariff.

In its December 2009 Draft Decision, the QCA deemed that train paths were the key capacity constraint for services traversing the Toowoomba Range (i.e. Surat Basin mines) and hence required the reference tariff to be converted (50/50) into an equivalent two-part tariff³:

- AT1 a volume and distance based charge levied at \$8.41 per 000 GTKs (\$2009/10); and
- AT2 a capacity based charge levied at \$3,962.00 per train path (\$2009/10).

The two-part tariff only applies to Surat Basin mines, with closer-in West Moreton mines, raiing out of Ebenezer, continuing to have the one-part tariff apply.

2.2 Objectives

The purpose of this submission is to outline Queensland Rail's reference tariff proposal as well as the inputs underpinning a model that is used to derive the tariff. Submissions detailing Queensland Rail's proposed capital and maintenance programs have been prepared to support this submission and in addition to these a copy of the reference tariff model will be provided to the QCA.

In developing its reference tariff proposal, Queensland Rail has paid consideration to the following objectives:

- A transparent and repeatable methodology that can be rolled forward into future regulatory periods; and
- The inclusion of Columboola as a nominated loading facility.

³ QCA Draft Decision on the QR Network 2009 Draft Access Undertaking, December 2009, pp. 93 & 94.

3 Methodology

3.1 Building Blocks Approach

Developing an appropriate reference tariff methodology for the West Moreton System is problematic as coal carrying train services share the system with non-coal traffics and are required to travel through the Brisbane Metropolitan Region to reach the Port of Brisbane.

Queensland Rail proposes to apply a building blocks methodology consistent with what was applied to Central Queensland Coal in past QR Network access undertakings. This has required an assessment of the following:

- Opening Asset Value;
- Capital Expenditure;
- Weighted Average Cost of Capital (WACC);
- Asset Depreciation;
- Asset Indexation;
- Maintenance Costs;
- Other Operating Costs;
- Gamma Adjusted Tax Payable; and
- Volumes.

While there was a common objective, i.e. the development of a transparent and repeatable approach that provides a robust methodology suitable for rolling forward into future regulatory periods, in past undertakings the QCA and QR Network were unable to reach agreement on exact building block parameters for the West Moreton System. As a result of this, reference tariffs for the system have either been set by way of compromise (2006 Access Undertaking) or by QR Network arbitrarily adjusting a revenue ceiling in order to reconcile to a QCA modelled reference tariff (2010 Access Undertaking).

The establishment of a transparent and repeatable building blocks approach, including the creation of a Regulatory Asset Base (RAB), would provide a degree of revenue/cost certainty going forward and permit the structured treatment of rebates. Even though rebates are currently based on capital contributions made by end-users, without agreed building blocks it is difficult to set rebates to correspond exactly to the portion of the tariff that relates to a return on and of the end-user funded infrastructure.

3.2 Inclusion of Macalister to Columboola

Syntech Resources (acquired by Yancoal in August 2011) had not commenced operations at its Cameby Downs mine when the 2010 Access Undertaking came into effect. The QCA in its June 2010 Draft Decision did not permit Columboola to be included as a loading point in the 2010 Access Undertaking and considered a future Draft Amending Access Undertaking necessary⁴.

Volumes for Columboola were included in the final three (of four) years of the forecast used by the QCA to derive its modelled reference tariff. Had both Columboola capital expenditure (between Rosewood to Macalister) and volumes been stripped out of the QCA's tariff calculations, existing mines would have attracted a higher tariff.

⁴ QCA Draft Decision on QR Network's 2010 DAU - Tariffs and Schedule F, June 2010, pp. 89 & 90.

The alternatives to adding Columboola as a loading point include:

- A single all-inclusive tariff incorporating both Rosewood to Macalister and Macalister to Columboola assets; and
- A separate Columboola tariff based on Columboola traffic paying a full (coal allocated) contribution to Macalister to Columboola assets and an equitable (coal allocated) contribution to Rosewood to Macalister assets.

The latter would involve excluding Columboola volumes from the determination of the tariff applicable to the Macalister and Jondaryan loading points. The effect of this, other things being equal, would be to increase the tariff. Contrastingly the allowable revenue permitted to be recouped from the Macalister and Jondaryan loading points would be decreased by a contribution made by Columboola coal traffic.

The difficulty with a separate Columboola tariff, as opposed to a single all-inclusive tariff, is determining what constitutes an equitable contribution; the quantum of the contribution influencing whether non-Cumboola loading points pay more or less under a single all-inclusive tariff. To avoid developing complex Contribution to Common Cost calculations that may not necessarily result in an equitable contribution, Queensland Rail is proposing a single all-inclusive tariff.

Queensland Rail believes this is a reasonable approach as:

- Excluding Yancoal funded assets and volumes results in a Rosewood to Macalister only tariff of \$26.08 per 000 GTKs, this is \$3.86 per 000 GTKs above the proposed all-inclusive tariff; and
- An all-inclusive tariff implies a Yancoal contribution of \$17.09 per 000 GTKs to the Rosewood to Macalister section.

An all-inclusive tariff that establishes a RAB for Macalister to Columboola assets provides a basis for rebates applicable to Yancoal funded assets west of Macalister. Rebates to Yancoal for Macalister to Columboola assets would represent 18.4% of the allowable revenue for that section.

3.3 Brisbane Metropolitan Region

Coal carrying train services originating in the West Moreton System utilise the Brisbane Metropolitan Region as they traverse the Ipswich, Beenleigh, Cleveland and then the dedicated dual gauge freight and coal (from Lytton Junction) lines to reach Fisherman Islands.

Fisherman Islands to Rosewood is dominated by metropolitan passenger services and hence the track quality is higher than that required for coal carrying train services. Assessing a cost for coal carrying train services for this section of track would be a sizeable task requiring a valuation, optimisation (in relation to track quality) and allocation (in relation to traffic type).

While previous Depreciated Optimised Replacement Cost (DORC) valuation exercises have been carried out on the Rosewood to Macalister and Macalister to Columboola sections, by both the QCA and QR Network, no such exercise has been attempted for Fisherman Islands to Rosewood. A valuation exercise would require a considerable amount of time and incur significant costs with the likely outcome an appraisal appreciably more than that for assets west of Rosewood. Subsequent optimisation and allocation processes would act to reduce the magnitude of the DORC but would be complex and difficult to carry out.

To avoid this complexity, similar to the existing and past practice, Queensland Rail proposes to apply the tariff derived from Rosewood to Columboola building blocks to the entire route

through to Fisherman Islands as this would see an appropriate contribution being made to costs and assets in the Brisbane Metropolitan Region.

Concerns regarding an artificial uplift of this contribution when additional capital expenditure is spent in the Rosewood to Macalister and Macalister to Columboola sections are abated as long as there is proportional capital expenditure in the Fisherman Islands to Rosewood section; the proportion being 3/7ths of Rosewood to Columboola (i.e. Fisherman Islands to Rosewood represents approximately 30% of total 000 GTKs). For example, in recent years significant expenditure has been spent in the Brisbane Metropolitan Region as part of the Metropolitan Freight Capacity Enhancements Project (component of the South East Queensland Infrastructure Plan and Program) including a non-electrified dedicated freight loop at Corinda.

In addition to Surat Basin mines, coal carrying train services originating from Ebenezer (solely in the Brisbane Metropolitan Region) travel through to Fisherman Islands. Similar to the Brisbane Metropolitan Region component of hauls originating in West Moreton System, Queensland Rail believes it is acceptable to apply the tariff derived from Rosewood to Columboola building blocks in lieu of complex valuation, optimisation and allocation exercises.

3.4 Train Path Allocation Percentage

3.4.1 General Application

The West Moreton System is a mixed traffic system as coal carrying train services share the system with grain, molasses, livestock, mixed freight and passenger train services. Given that the system is capacity constrained the principle espoused in clause 3.1.2(b)(iii) of AU1 (equivalent to clause 6.3.1(b)(ii) of the Temporary Undertaking) and reiterated in the QCA's December 2009 Draft Decision⁵ applies.

In more general terms the principle is that in determining a ceiling revenue limit, all traffics should be assessed as paying the same price on a capacity constrained network regardless of whether they actually do. This principle has previously been applied by both the QCA and QR Network through the application of a train path allocation percentage to the common network DORC valuation; the common network being defined as infrastructure that is used by all traffics with coal only sidings, such as Jondaryan coal siding and Macalister coal siding, not having the general coal train path allocation percentage applied (this can also be interpreted as having a 100.0% coal train path allocation percentage applied).

Queensland Rail proposes to continue with this practice and based on contracted train paths the following will apply:

RAB	Contracted Coal Paths	Contracted Non-Coal Freight Paths	Contracted Passenger Paths	Contracted Paths	Coal Train Path Allocation %
Rosewood to Macalister	77	27	2	106	72.6%
Macalister to Columboola					50.0%

While an all-inclusive tariff is proposed, separate RABs will be maintained for the Rosewood to Macalister and the Macalister to Columboola sections so that the different coal train path allocation percentages can be applied.

⁵ QCA Draft Decision on the QR Network 2009 Draft Access Undertaking, December 2009, pp. 79 & 80.

3.4.2 Reduction for Brisbane Metropolitan Region Peak

In its December 2009 Draft Decision, the Authority deemed it necessary to apply a further reduction to the coal train path allocation percentage applied to pre-1995 assets⁶. This was done on the basis that West Moreton System service levels were impacted by the Brisbane Metropolitan Region peak.

The reduction applied by the QCA was 20.0% with its argument being that there were two three-hour blackout periods, also referred to by the QCA as a peak curfew, to cater for the morning and afternoon weekday peaks for passenger traffic.

While Queensland Rail does have a Brisbane Metropolitan Region passenger weekday peak between the hours of 7:00AM to 9:30AM and 3:00PM to 6:30PM, a strict peak curfew for non-passenger trains is not in place. This being said, Queensland Rail's network planners do have difficulty finding slots for non-passenger trains during these periods. However notwithstanding this, slots in the opposite direction to peak are regularly used by coal carrying train services during peak periods – i.e. empty trains travelling towards Toowoomba in the morning peak and loaded trains travelling to the Port of Brisbane in the afternoon peak. The overall effect of running services in the opposite direction to peak is to reduce the unavailability of the network from six to five hours (on average) each weekday.

Queensland Rail proposes to apply a 15.0% reduction to the coal train path allocation percentage applied to pre-1995 assets rather than the 20.0% previously applied by the QCA.

This has been determined as follows:

$(5 \text{ hours of unavailability} * 5 \text{ week days}) / (24 \text{ hours in a day} * 7 \text{ days in a week}) = 14.88\%$

This is then rounded up to 15.0%.

Applying this to a 72.6% coal train path allocation percentage reduces the allocation percentage to 61.7%.

Applying this to a 50.0% coal train path allocation percentage reduces the allocation percentage to 42.5%.

Consistent with the QCA's December 2009 Draft Decision, no further reduction is being proposed by Queensland Rail to apply to capital expenditure since 1995 as investment decisions were made on the basis of paths actually being used by traffics rather than the paths potentially available after peak sterilisation⁷.

3.4.3 End-User Funded and Coal Specific Capital Expenditure

Over the years, West Moreton System end-users have funded several infrastructure improvements to accommodate coal carrying train services – e.g. Surat Basin Track Upgrade Stages 1 to 3, Jondaryan Track Upgrade and the Columboola to Fisherman Islands Project. These investments were carried out solely for the purpose of facilitating coal volumes and as such Queensland Rail proposes that no train path allocation percentage be applied to them – i.e. 100% of asset values are to be included in reference tariff building blocks.

To ensure capital is not recouped twice, once through the funding arrangement and again through the reference tariff, West Moreton System end-users, in relation to assets that they fund, are entitled to receive a rebate for any return on and of assets included in reference

⁶ QCA Draft Decision on the QR Network 2009 Draft Access Undertaking, December 2009, pp. 74, 75 & 80.

⁷ QCA Draft Decision on the QR Network 2009 Draft Access Undertaking, December 2009, p. 84.

tariff building blocks. Permitting 100% of end-user funded assets to be included in reference tariff building blocks aids Queensland Rail's investment decisions as it would be unacceptable to proceed with an investment, even if it is end-user funded, in circumstances where only a partial return is included in reference tariff building blocks but a full return is rebateable to end-users.

Similar to the argument above, in circumstances where Queensland Rail is considering funding infrastructure that relates solely to facilitating coal, an investment is unlikely to proceed where only a partial return is included in reference tariff building blocks. This is because the shortfall in return is unlikely to be recouped from non-coal traffics in circumstances where the infrastructure is not required by them. As such Queensland Rail proposes not to apply a train path allocation percentage to coal specific capital expenditure.

3.4.4 Summary of Coal Train Path Allocation Percentages

Below are the coal train path allocation percentages Queensland Rail is proposing:

RAB	Pre-1995 Assets	Capital Expenditure since 1995	End-User Funded Assets	Coal Specific Capital Expenditure
Rosewood to Macalister	61.7%	72.6%	100.0%	100.0%
Macalister to Columboola	42.5%	50.0%	100.0%	100.0%

4 Building Blocks

4.1 Opening Asset Value

In the lead up to QR Network's Western System Coal Tariff Development September 2008 Submission to the QCA, QR Network engaged Aurecon Hatch to conduct a DORC valuation of the West Moreton System between Rosewood and Columboola with a datum date of 1 August 2007. Subsequent to this, consultancy firm Everything Infrastructure was commissioned by the QCA to review this valuation. Everything Infrastructure's findings were then assessed by Aurecon Hatch for their reasonableness with a rebuttal prepared in respect to several key issues.

As at 1 August 2007 (\$m)	Rosewood To Macalister				Macalister to Columboola	
	Everything Infrastructure		Aurecon Hatch Rebuttal		Everything Infrastructure	Aurecon Hatch Rebuttal
Common Network DORC	278.5		318.9		118.1	96.9
Relevant Time Period Split	Pre 1995	Since 1995	Pre 1995	Since 1995	Not Assessed	Not Assessed
Common Network DORC	230.0	48.5	270.4	48.5		
EI Coal Train Path Alloc %	60.5%	75.6%	60.5%	75.6%		
Post Allocation	139.1	36.6	163.6	36.6		
Coal Only Sidings	1.4		2.1			
Opening Asset Value	177.1		202.3			

For the purpose of progressing the reference tariff, Queensland Rail proposes to adopt the QCA's DORC valuation (as assessed by Everything Infrastructure) as the opening asset value at 1 August 2007 with the exception of applying two adjustments. These adjustments relate to the incorrect allocation of tunnels located in the Rosewood to Macalister section to the Macalister to Columboola section and the quantum of the reduction for the Western

System Asset Replacement Project (formerly the Surat Basin Track Upgrade Stage 4 Project).

It should be noted that even though the West Moreton System extends from Rosewood to Miles, only assets between Rosewood to Macalister and Macalister to Columboola will be included in the reference tariff building blocks – this can also be viewed as applying a 0.0% coal train path allocation percentage to assets between Columboola and Miles.

4.1.1 Appropriateness of DORC Valuation

There are various cost-based valuation approaches and amongst these are Depreciated Actual Cost (DAC) and DORC. The DORC approach is overwhelmingly supported by regulators in other jurisdictions, and is consistent with the prevailing approach of the QCA. Currently ARTC Interstate, ARTC Hunter Valley and AustralAsia Railway (including Tarcoola to Darwin Rail) all specify a DORC approach to valuing assets.

The primary rationale for using DORC to value assets, in preference to other valuation methods, is that it provides a better indication of the opportunity cost to the owner (and the economy) of the assets devoted to a particular activity.

DAC or depreciated historical cost represents the original cost of acquiring the asset reduced by the proportion of the asset service which has expired (which recognises that an asset's remaining service life may be less than the life which would normally be expected from a new asset).

There are significant problems associated with the DAC approach which diminishes its ability to provide relevant information for current and future economic decision making⁸:

- Historical data from asset registers may be incomplete or non-existent, and there may be difficulties associated with the different accounting standards on capitalisation and rates of depreciation when considering very long periods of time;
- Historic cost values, especially in the case of long-lived assets, have little or no relationship with market values or replacement costs. For example, persistent inflation causes capital valuation and capital costs to be underestimated relative to current values. Conversely, a historical cost based valuation takes no account of the service potential of an asset or technological obsolescence; and
- Valuations based on historic cost would make tariffs dependent on asset age and could lead to price shocks when assets are replaced.

As such, DAC generally has not been used for the valuation of assets by regulators.

Many of the issues identified with the DAC approach are addressed with the use of DORC. DORC represents the unconsumed portion of an asset (i.e. that value which reflects its remaining service life) based on an optimal network.

The advantages of DORC include:

- The optimisation process ensures that obsolete, poorly sized or poorly located assets are not included in the capital base and consequently are not paid for by users;
- It allows for technological change (assets can be valued in a way that reflects current technology rather than outdated technology);
- It addresses a major problem of DAC, namely, the incompatibility in relating historical values for capital assets and capital costs with current values for other revenue and expenses; and

⁸ QCA Issues Paper on Queensland Rail - Draft Access Undertaking: Asset Valuation, Depreciation and Rate of Return, May 1999, pp. 6 & 7.

- It establishes asset values that will minimise incentives for 'inefficient' by-pass of the network.

Queensland Rail considers DAC to be unsuitable for the purpose of Queensland Rail's valuation of assets and maintain that DORC is the preferred valuation approach as evident in other regulatory jurisdictions. By implication, developing a reference tariff incorporating DAC values, in part or in full, has no practical or commercial relevance.

4.1.2 Tunnel Allocation Adjustment

In its DORC valuation assessment, Everything Infrastructure determined the DORC value of tunnels between Rosewood to Columboola to be \$85.9m. This was then allocated to Rosewood to Macalister and Macalister to Columboola based on distances, resulting in \$26.0m of the \$85.9m being allocated to Macalister to Columboola. As all tunnels between Rosewood to Columboola reside in the Rosewood to Macalister section, the QCA's DORC valuation for Rosewood to Macalister is understated by \$26.0m while its DORC valuation for Macalister to Columboola is overstated by the same amount.

4.1.3 Western System Asset Replacement Project Reduction

In its December 2009 Draft Decision, the QCA, on the advice of Everything Infrastructure, deemed it necessary to deduct \$22.4m from its assessment of opening asset value to account for forecast spending on the Western System Asset Replacement Project – the \$22.4m representing the net present value of forecast spending⁹. The QCA's rationale was that the planned capital expenditure served only to bring West Moreton System infrastructure to the standard assumed in the DORC valuation.

Queensland Rail argues that even though the project did involve a degree of remedial work to bring track to a condition suitable for the coal traffic task, the entire project should not be viewed in this light. A level of recurring asset replacement is necessary for any network as assets reach the end of their useful lives and as such it should not be asserted that expenditure not directly associated with an increase in capacity needs to be excluded – i.e. there is justification to incur capital expenditure that maintains the quality and serviceability of the existing network.

As the condition of assets were taken into consideration in deriving the "depreciated" aspect of the DORC valuation, the practice put forward by the QCA of deducting the net present value of the forecast spend from the opening asset value, but then permitting it to be added in future capital expenditure claims, is not considered appropriate. Excluding near life expired assets and replacing them with new assets would result in a higher assessment of remaining asset lives and hence DORC.

After consideration of the above, Queensland Rail proposes that only the immediate works carried out between 2006/07 and 2008/09 be classified as remedial with the remainder of the project from 2010/11 treated as asset replacement works that would be a part of prudent asset management. As works carried out in 2006/07 would already be included in the opening asset value (i.e. there will be no capital claim in relation to 2006/07 works), the opening asset value adjustment being proposed by Queensland Rail represents the net present value of works carried out between 2007/08 and 2008/09, which is \$3.5m.

⁹ QCA Draft Decision on the QR Network 2009 Draft Access Undertaking, December 2009, pp. 83 & 84.

4.1.4 Summary of Opening Asset Value

As at 1 August 2007 (\$m)	Rosewood To Macalister			Macalister to Columboola		
EI Original Common Network DORC	278.5			118.1		
Add/Deduct Tunnel Allocation Adjustment	26.0			-26.0		
Add Back QCA WSAR Adjustment	22.4			0.0		
Deduct Proposed AU1 WSAR Adjustment	-3.5			0.0		
Proposed AU1 Common Network DORC	323.4			92.1		
Relevant Time Period Split	Pre 1995	Since 1995	End-User	Pre 1995	Since 1995	End-User
Proposed AU1 Common Network DORC	276.1	36.7	10.6	92.1	0.0	0.0
Proposed AU1 Coal Train Path Allocation %	61.7%	72.6%	100.0%	42.5%	50.0%	100.0%
Post Allocation	170.4	26.7	10.6	39.1	0.0	0.0
Coal Only Sidings	1.4			0.0		
Opening Asset Value	209.0			39.1		

4.2 Asset Lives and Indexation

4.2.1 Asset Lives

The Authority in its December 2009 Draft Decision provided information on the assumed lives of assets included in the RAB for the West Moreton System¹⁰. Queensland Rail proposes to adopt these lives with the exception of combining the sleepers, rail, turnouts, ballast and top 600 asset classes into one, entitled track including turnouts, with a weighted average life of 35 years. The rationale behind this is that it has not been Queensland Rail's practice to separately record individual track components and while turnouts are recorded separately, historically QR Network, with respect to Central Queensland Coal RABs, amalgamated track and turnouts into one class.

Asset Class	QCA Dec 09 Draft Decision Assumed Lives (Years)	Proposed AU1 Assumed Lives (Years)
Sleepers	50	35 (One Class for Track including Turnouts)
Rail	20	
Turnouts	20	
Ballast	20	
Top 600	50	
Roads	38	38
Fences	20	20
Signals	20	20
Bridges	50	50
Culverts	50	50
Earthworks	100	100
Tunnels	100	100
Land Acquisition	50	50
Telecommunications	20	20
Power Systems	20	20

¹⁰ QCA Draft Decision on the QR Network 2009 Draft Access Undertaking, December 2009, p. 78.

4.2.2 Asset Indexation

Consistent with QR Network's past practice, Queensland Rail intends to roll forward its assets with indexation at the Consumer Price Index: All Groups – Brisbane (Australian Bureau of Statistics Publication No. 6401.0). As the indexation for the 2012/13 year was still to be published at the time of this submission an estimate of 2.5% has adopted but will be revised, along with items such as the WACC, prior to a QCA Final Decision.

Item	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Actual / Estimated Indexation	5.12%	2.02%	3.20%	3.84%	0.92%	2.50%
Number of Months Applicable	11	12	12	12	12	12

For the reset period an indexation estimate of 2.5% will continue to be used as this is the midpoint of the Reserve Bank's target range and this practice has not been contentious in the past.

4.3 WACC

Queensland Rail proposes that the methodology used to determine WACC remain unchanged from the Authority's June 2010 Draft Decision with time variant debt parameters updated¹¹.

While the majority of Australian regulators adopt a ten year term assumption with respect to debt parameters, Queensland Rail will accept the five year term assumption adopted by the QCA in relation to QR Network's 2010 Access Undertaking, provided the Authority continues to make provision for the management of the refinancing risk associated with shorter term debt.

A WACC estimate based on yield and spread data obtained by Queensland Rail following the March 2013 quarter is as follows:

Parameter	QCA June 2010 Draft Decision	AU1 Estimate as at 31 March 2013
Credit Rating	BBB+	BBB+
Risk-Free Rate	5.19%	3.12%
Market Risk Premium	6.00%	6.00%
Asset Beta	0.45	0.45
Gearing	55.00%	55.00%
Equity Beta	0.80	0.80
Gamma	0.50	0.50
Equity Margin	4.80%	4.80%
Cost of Equity	9.99%	7.92%
Debt Margin (Pre Allowances)	3.62%	1.87%
Refinancing Risk Allowance – Credit Default Swap (Proxy)	0.83%	0.83%
Refinancing Risk Allowance – Interest Rate Swap	0.175%	0.175%
Debt Issuance Allowance	0.125%	0.125%
Debt Margin	4.75%	3.00%
Cost of Debt	9.94%	6.12%
WACC Margin	4.77%	3.81%
WACC	9.96%	6.93%

¹¹ QCA Draft Decision on QR Network's 2010 DAU - Tariffs and Schedule F, June 2010, pp. 34 - 56.

Queensland Rail anticipates that a WACC for the reference tariff reset period will be finalised following the setting of a 20 day averaging period for the risk free rate and debt margin by the QCA. This averaging period is to be set some time in the future, but prior to the QCA's Final Decision, and will remain confidential until it has elapsed to avoid any potential bias.

The proposed reference tariff will be revised, including associated capitalised interest estimates that form part of the capital expenditure building block, following the finalisation of the WACC.

4.4 Volume Forecasts

Volume represents a critical building block as it represents the denominator applied to the ceiling revenue limit to derive the reference tariff. Queensland Rail has adopted currently contracted volumes as its forecast for each year of the reference tariff reset period:

Loading Point	Contracted Weekly Return Paths	Annual					Total Haul 000 GTKs
		One Way Paths	Net Tonnes (Million)	Fisherman Islands to Rosewood 000 GTKs	Rosewood to Macalister 000 GTKs	Macalister to Columboola 000 GTKs	
Jondaryan							
Macalister							
Columboola							
Total	77	7,700	7.545	1,061,984	2,490,288		

A forecast equivalent to contract results in consistency with the application of the train path allocation percentage previously discussed in section 3.4. As all traffics should be assessed as paying the same price on a capacity constrained network for the purposes of determining a ceiling revenue limit, above contract coal railings should be viewed as substitutions of coal for non-coal paths.

The total number of services in the West Moreton System, coal and non-coal, on average run well below the number contracted. For example in 2011/12, a year relatively unaffected by wet weather events, coal services ran three return paths per week above the 77 contracted whereas non-coal freight services ran 16 return paths under the 27 contracted. These figures demonstrate that Queensland Rail does not gain an advantage by the non-implementation of a revenue cap form of regulation. In contrast, Queensland Rail would likely benefit from the implementation of a revenue cap, especially considering the likelihood of wet weather events, however Queensland Rail does not seek to implement one as it does not promote the right supply chain incentives.

The majority of West Moreton System coal access agreements expire midway through the reference tariff reset period in December 2014. Queensland Rail is taking volume risk and will be negatively impacted should any access rights not be taken up or be taken up by the replacement of paths from a loading point closer to the Port of Brisbane.

4.5 Capital Program

Queensland Rail has developed a capital program for the period 2013/14 to 2016/17, which corresponds to the term of the reference tariff reset. The composition of the capital program together with capital expenditure incurred since the opening asset value datum date are outlined in the following document that has been provided to the QCA, "AU1 West Moreton Reference Tariff Reset Capital Submission". Consultant WorleyParsons has been engaged

by Queensland Rail to undertake an external engineering review of the planned capital program to ensure that it is prudent, robust and appropriate for the traffic task.

For each project identified, a distinction is made between works carried out between Rosewood to Macalister and Macalister to Columboola as well as whether the project solely facilitates coal traffic. Unlike QR Network's 2010 Access Undertaking, Queensland Rail is not seeking to add a share of Transport Service Contract projects (i.e. those attracting Government support) to either of the two RABs – this is equivalent to applying a 0.0% coal train path allocation percentage to these projects. In contrast to this, and as previously discussed, a 100.0% coal train path allocation percentage is being sought in relation to projects that solely facilitate coal traffic (including those funded by end-users).

The total capital being claimed for the period prior to the reset is summarised below:

RAB (\$000's)	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	Total
Rosewood to Macalister							
End-User Funded							
Commissioned Costs	9	1,685	11,397	17,058	2,332	521	33,002
Capitalised Interest	0	84	568	1,690	116	26	2,484
End-User Funded Subtotal	9	1,769	11,965	18,748	2,448	547	35,486
Coal Specific							
Commissioned Costs	3,593	51	0	3,577	6,724	9,636	23,581
Capitalised Interest	179	3	0	178	335	480	1,175
Coal Specific Subtotal	3,772	54	0	3,755	7,059	10,116	24,756
Total Claimed	3,781	1,822	11,965	22,503	9,507	10,663	60,241
Macalister to Columboola							
End-User Funded							
Commissioned Costs	0	0	0	15,204	2,102	469	17,775
Capitalised Interest	0	0	0	1,515	105	23	1,643
End-User Funded Subtotal	0	0	0	16,719	2,207	492	19,418
Total Claimed	0	0	0	16,719	2,207	492	19,418

As noted in the capital submission document, the claim amount for 2012/13 includes an estimate for the Western System Asset Replacement Project that is ongoing. Accordingly the 2012/13 claim amount will be revised following the QCA's Draft Decision (i.e. post 2012/13 year-end).

The capital program planned to be undertaken during the reset period is summarised below:

RAB (\$000's)	2013/14	2014/15	2015/16	2016/17	Total
Rosewood to Macalister					
All Traffics					
Commissioned Costs	2,148	3,709	4,300	5,591	15,748
Capitalised Interest	74	129	149	194	546
All Traffics Subtotal	2,222	3,838	4,449	5,785	16,294

RAB (\$000's)	2013/14	2014/15	2015/16	2016/17	Total
Coal Specific					
Commissioned Costs	18,320	14,303	13,666	11,731	58,020
Capitalised Interest	635	496	474	406	2,010
Coal Specific Subtotal	18,955	14,799	14,140	12,137	60,030
Total Claimed	21,177	18,636	18,589	17,922	76,324
Macalister to Columboola					
All Traffics					
Commissioned Costs	156	169	1,026	112	1,463
Capitalised Interest	5	6	36	4	51
All Traffics Subtotal	161	175	1,062	116	1,514
Coal Specific					
Commissioned Costs	416	433	450	2,408	3,707
Capitalised Interest	14	15	16	83	128
Coal Specific Subtotal	430	448	466	2,491	3,835
Total Claimed	592	623	1,527	2,607	5,349

As noted in the capital submission document, capitalised interest estimates will be revised once the QCA sets the regulatory WACC for the AU1 reference tariff reset period.

4.6 Maintenance Program

Similar to the capital program, Queensland Rail has developed a maintenance program for the period 2013/14 to 2016/17, which corresponds to the term of the reference tariff reset. As with the capital program, external railway engineering adviser WorleyParsons has been commissioned to perform a review of the maintenance program to ensure that it is prudent, robust and appropriate for the traffic task.

Estimates for maintenance works planned to be undertaken in the West Moreton System during the reset period were grouped by major activity: track (excluding mechanised resleepering), mechanised resleepering, trackside systems, facilities and structures.

Since the West Moreton System extends from Rosewood to Miles and the traffic mix varies between Rosewood to Macalister and Macalister to Miles, it is necessary to allocate maintenance costs to derive separate estimates for each of the sections. Once this allocation has been performed a further allocation is required for each of the sections to attribute costs to either coal or non-coal traffics. The basis proposed to perform both allocations is 000 GTKs, an approach that was accepted by the Authority in its December 2009 Draft Decision as reasonable¹².

¹² QCA Draft Decision on the QR Network 2009 Draft Access Undertaking, December 2009, pp. 88 & 89.

The allocations are outlined below:

Item (000 GTKs)	2013/14	2014/15	2015/16	2016/17
Allocation 1:				
Total 000 GTKs				
Rosewood to Macalister	2,735,270	2,735,270	2,735,270	2,735,270
Macalister to Miles	245,997	245,997	245,997	245,997
	2,981,267	2,981,267	2,981,267	2,981,267
Rosewood to Macalister	91.75%	91.75%	91.75%	91.75%
Macalister to Miles	8.25%	8.25%	8.25%	8.25%
Allocation 2:				
Rosewood to Macalister 000 GTKs				
Coal	2,490,288	2,490,288	2,490,288	2,490,288
Non-Coal				
Grain & Molasses	190,482	190,482	190,482	190,482
Livestock	8,719	8,719	8,719	8,719
Mixed Freight	29,620	29,620	29,620	29,620
Passenger	16,161	16,161	16,161	16,161
Total Non-Coal	244,982	244,982	244,982	244,982
	2,735,270	2,735,270	2,735,270	2,735,270
Coal %	91.04%	91.04%	91.04%	91.04%
Non-Coal %	8.96%	8.96%	8.96%	8.96%
Macalister to Miles 000 GTKs				
Coal				
Non-Coal				
Grain & Molasses				
Livestock				
Mixed Freight				
Passenger				
Total Non-Coal				
Coal %	90.99%	90.99%	90.99%	90.99%
Non-Coal %	9.01%	9.01%	9.01%	9.01%

Applying the above allocations to the planned maintenance program results in the following:

Item (\$000's)	2013/14	2014/15	2015/16	2016/17
West Moreton System Maintenance				
Track (excl. Mech Resleepering)	16,237	15,094	15,887	15,425
Mechanised Resleepering	0	0	14,497	9,384
Trackside Systems	2,300	2,288	2,271	2,250
Facilities	144	150	156	162
Structures	2,004	2,001	2,315	1,951
	20,686	19,533	35,126	29,172

Item (\$000's)	2013/14	2014/15	2015/16	2016/17
Apply Allocation 1:				
Rosewood to Macalister Proportion %	91.75%	91.75%	91.75%	91.75%
Macalister to Miles Proportion %	8.25%	8.25%	8.25%	8.25%
Rosewood to Macalister Proportion	18,979	17,921	32,227	26,765
Macalister to Miles Proportion	1,707	1,612	2,898	2,407
	20,686	19,533	35,126	29,172
Apply Allocation 2:				
Rosewood to Macalister Proportion	18,979	17,921	32,227	26,765
Rosewood to Macalister Coal Proportion %	91.04%	91.04%	91.04%	91.04%
Proposed Allowance Rosewood to Mac'	17,279	16,316	29,341	24,368
Macalister to Miles Proportion	1,707	1,612	2,898	2,407
Macalister to Miles Coal Proportion %	90.99%	90.99%	90.99%	90.99%
Proposed Allowance Macalister to Miles	1,553	1,467	2,637	2,190

It should be noted that no provision for derailments or flooding events has been made in the above estimates. Should a significant event occur, Queensland Rail may need to either submit a review event reference tariff variation, in accordance with clause 5 of schedule A of AU1, or request a one off contribution from end-users.

Further detail relating to the planned maintenance program for the West Moreton System can be obtained from the following document that has been provided to the QCA, "AU1 West Moreton Reference Tariff Reset Maintenance Submission".

4.7 Other Operating Costs

The other operating cost allowances provided for in the QCA's December 2009 Draft Decision are no longer appropriate for the West Moreton System following the separation of QR Limited into Aurizon and Queensland Rail¹³. While regional cost estimates were built from the bottom up, the QR Limited cost structure and allocators used to assess system wide costs are no longer applicable to Queensland Rail.

Queensland Rail is proposing other operating cost allowances based on expenditure reported in its published 2011/12 Below Rail Financial Statements. However as Queensland Rail has implemented a strong program of reform that will transition it to be a more efficient, effective and responsive organisation, a glide path to efficiency of 80.0% (2013/14), 76.5% (2014/15), 73.0% (2015/16) and 70.0% (2016/17) will be applied.

As an allocation of Queensland Rail's insurance premium is included 2011/12 expenditure no additional risk premium has been added to the proposed allowance. Consistent with past access undertakings a working capital allowance of 0.3% of revenue has been added.

¹³ QCA Draft Decision on the QR Network 2009 Draft Access Undertaking, December 2009, pp. 89 & 90.

Calculations relating to the proposed other operating cost allowances are below:

Item (\$000's)	Include in Allowance	Exclude from Allowance	Total as per BR Fin Statements
2011/12 Below Rail Financial Statements			
Operating Expenses			
Train Operations Management:			
Train Control	3,070	0	3,070
Corridor Management	381	0	381
Planning & Systems (Allocated)	289	0	289
	3,740	0	3,740
Other Expenses:			
QCA Fees	0	137	137
Regional Costs (i.e. Council Rates & Power)	163	0	163
Engineering Services (Allocated)	697	0	697
Business Management (Allocated)	391	0	391
Group Management (Allocated)	878	0	878
Operational Telecommunications (Allocated)	194	582	776
Business Telecommunications (Allocated)	133	0	133
Other (Allocated)	71	51	122
	2,528	770	3,298
Corporate Overhead	2,921	0	2921
Total Operating Expenses	9,189	770	9,959
Return on Buildings, Plant, Software & Inventory			
Buildings (Subset of Property)	3,076		
Plant	6,807		
Software	1,294		
Current Inventory	1,624		
Non-Current Inventory	376		
	13,177		
WACC Estimate	6.93%		
Total Return on Buildings, Plant, Software & Inv	913		
Grand Total (2011/12)	10,102		

Item (\$000's)	Total	Rosewood to Macalister	Macalister to Miles
Proposed (Pre Glide Path)			
Other Operating Costs (2011/12)	10,102		
Escalation Factor to 2013/14	1.034		
	10,450		

Item (\$000's)	Total	Rosewood to Macalister	Macalister to Miles
Other Operating Costs (2013/14)		10,450	10,450
Section Allocation (50% TKMs + 50% 000 GTKs)		91.39%	8.61%
		9,550	900
Coal Train Path Allocation %		72.6%	50.0%
		6,933	450
Working Capital		157	23
Other Operating Costs incl. Work Cap (2013/14)		7,091	473

Item (\$000's)	2013/14	2014/15	2015/16	2016/17
Proposed (Post Glide Path)				
Rosewood to Macalister				
Escalated Other Op' Costs	7,091	7,268	7,450	7,636
Glide Path to Efficiency	80.0%	76.5%	73.0%	70.0%
Proposed Allowance (R-M)	5,672	5,560	5,438	5,345
Macalister to Miles				
Escalated Other Op' Costs	473	485	497	509
Glide Path to Efficiency	80.0%	76.5%	73.0%	70.0%
Proposed Allowance (M-M)	378	371	363	357

It should be noted that the return on buildings, plant, software and inventory allowance, escalation factor to 2013/14 and working capital allowance will be revised when the WACC and 2012/13 inflation figure are finalised – this is expected to be carried out after the QCA's Draft Decision but prior to its Final Decision.

5 West Moreton Reference Tariff

5.1 Proposed Reference Tariff

Utilising the methodology and building block inputs outlined in the last two sections, Queensland Rail has derived a reference tariff for coal carrying train services in the West Moreton System of \$22.22 per 000 GTKs. The proposed reference tariff will be applicable from the 1 July 2013 and represents a 22.2% increase to the 2012/13 reference tariff in place under the Temporary Undertaking (i.e. \$18.18 per 000 GTKs).

While the movement in the WACC and increase in contracted volumes brought about by the commissioning of the Jondaryan Track Upgrade and Columboola to Fisherman Islands projects have acted to reduce the tariff, other movements and amendments have had the opposite effect. A waterfall chart of reference tariff movements is provided as Attachment 1.

As described in section 3.3, Queensland Rail intends to charge coal carrying train services originating in the West Moreton System the same reference tariff rate for both the West Moreton System and Brisbane Metropolitan Region components of their hauls. In line with the QCA's December 2009 Draft Decision, Queensland proposes to introduce a capacity component to the reference tariff and convert the derived rate into a two-part tariff – similar to the approach adopted by the Authority each part will be weighted 50/50¹⁴. The conversion

¹⁴ QCA Draft Decision on the QR Network 2009 Draft Access Undertaking, December 2009, pp. 93 & 94.

results in the following two-part tariff for coal carrying train services originating in the West Moreton System:

- AT1 a volume and distance based charge levied at \$11.11 per 000 GTKs; and
- AT2 a capacity based charge levied at \$5,449.78 per train path.

As previously noted, coal carrying train services originating from Ebenezer travel solely in the Brisbane Metropolitan Region. Notwithstanding this, Queensland Rail is proposing to have a reference tariff for these services that is equivalent to the reference tariff rate derived from West Moreton System building blocks. Unlike services originating in the West Moreton System, Ebenezer coal carrying train services are unaffected by the constraint of having to travel up and down the Toowoomba Range and as such a one-part tariff (AT1) of \$22.22 per 000 GTKs is proposed to apply.

5.2 Capital Optimisation Study to Increase Capacity

Aurizon and Queensland Rail are working collaboratively together to develop and evaluate above and below rail opportunities to increase West Moreton System capacity up to 15 million net tonnes per annum. Should a viable option be found and implemented it would benefit the entire West Moreton System supply chain.

The options being considered include:

- Additional passing loops (25 range paths);
- Longer train consists including extending the length of passing loops (1,070m);
- New locomotives and linear density wagons;
- Infrastructure upgrades to allow 20 tonne axle load; and
- Combinations of the above.

The optimisation study is still in its infancy (concept phase) and would need to pass through feasibility and ultimately execution to have an impact on the reference tariff. While there is expected to be a significant lead time through to execution, in the event that an option is implemented during the reset period, Queensland Rail would submit a Draft Amending Access Undertaking to take into account the additional volumes and capital expenditure.

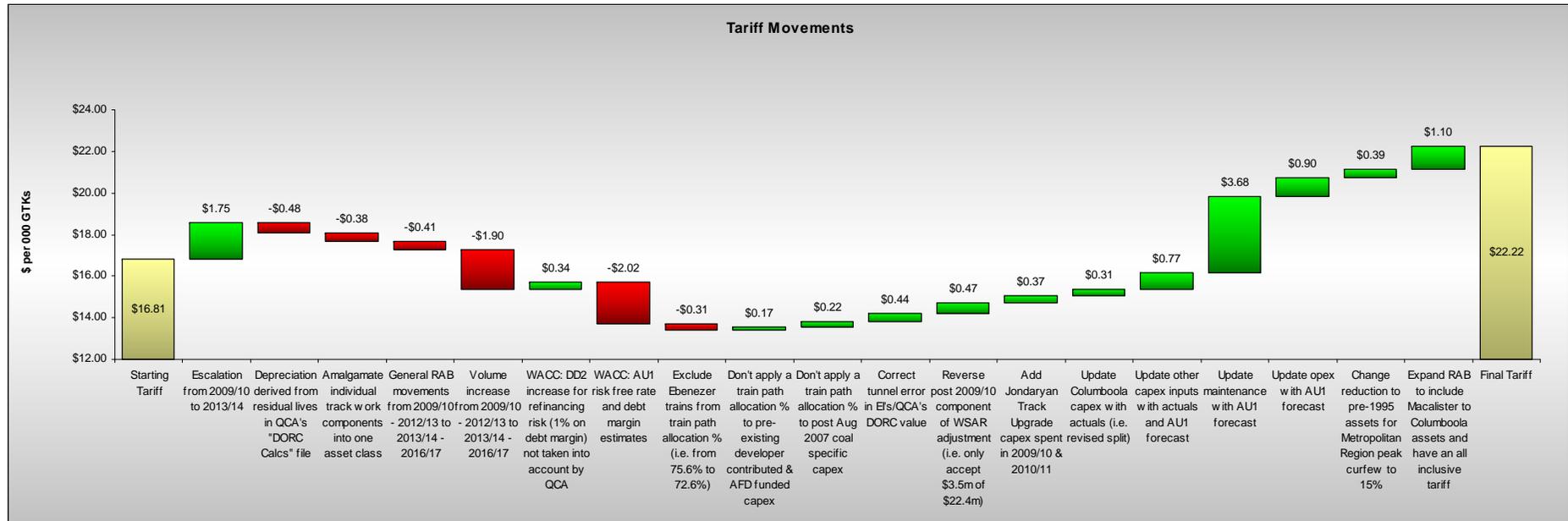
5.3 Amendments to the AU1 Document

Following Queensland Rail's work on developing a reference tariff for West Moreton System coal carrying train services it will be necessary to refine and insert several definitions into part 7 of AU1 – see Attachment 2 for a list of these definitions.

In schedule A of AU1, the reference tariffs specified need to reflect the revised tariffs developed by Queensland Rail, including an effective date of 1 July 2013, and Columboola needs to be added as a nominated loading facility – see Attachment 3. Additionally a new schedule, schedule AA, needs to be included to outline requirements relating to the RABs being proposed by Queensland Rail, including capital expenditure and asset roll forward reporting as well as the introduction of a capital expenditure carryover account – see Attachment 4. The body of AU1 will need to refer to schedule AA and this will be achieved by inserting a new clause, clause 3.7, in part 3 of AU1 – see Attachment 5.

A final amendment relates to the cover of the Standard Access Agreement (schedule F of AU1) that is required to have a reference to “the West Moreton System” altered to read “the West Moreton System or Metropolitan Region” – see Attachment 6.

Attachment 1: Reference Tariff Movement Waterfall



Attachment 2: Amended AU1 Definitions

Refined Definitions

Terminating Date means the earlier of:

- (a) 30 June 2017; and
- (b) the date on which this Undertaking is withdrawn in accordance with the QCA Act.

WACC means the weighted average cost of capital which:

- (a) as at the Approval Date, means a rate of 6.93% nominal post-tax; and
- (b) after the Approval Date, means a rate equivalent to the Undertaking Risk Free Rate plus the Margin.

West Moreton Reporting Area means the area defined as the West Moreton System.

West Moreton System means that part of the Network comprising the rail corridor from Rosewood to Miles, excluding all branch lines not directly connecting coal mine loading facilities to that rail corridor.

Additional Definitions

Approved Capital Expenditure means all capital expenditure accepted into the Regulatory Asset Base by the QCA in accordance with **clause 2.1(a)** of **schedule AA**.

Capital Indicator means the annual capital expenditure allowance approved by the QCA, from time to time, for the purpose of assessing the relevant Reference Tariffs.

Reasonable Demand means the aggregate of current contracted demand for Access, likely future demand (within a reasonable timeframe) for Access and any reasonable spare Capacity in the Network as determined by Queensland Rail, acting reasonably.

Regulatory Asset Base means the asset value for the West Moreton System accepted by the QCA for the purpose of developing Reference Tariffs for coal carrying Train Services, as maintained by Queensland Rail in accordance with **clause 3.7**.

Safety Management System means a system developed by Queensland Rail to manage all risks associated with the provision of the Network and safe management of Train operations on the Network, including specifically those risks identified in any Interface Risk Assessments, and which forms a basis upon which Queensland Rail is accredited under Part 5 of the TRSA as a rail infrastructure manager (as defined in the TRSA).

Attachment 3: Amended Schedule A

Schedule A

West Moreton System Reference Tariff

1 Term

The Reference Tariffs set out in this Schedule are effective from 1 July 2013 until the Terminating Date.

2 Reference Train Service

2.1 Description of Reference Train Service

The description of the Reference Train Service for the Reference Tariffs set out in this Schedule is as follows:

- (a) **(Commodity)** The Reference Train Service carries only bulk coal.¹
- (b) **(Geographic scope)** The Reference Train Service operates on the rail corridor directly connecting a specified Nominated Loading Facility in the West Moreton System or Metropolitan Region, and a specified Nominated Unloading Facility.²
- (c) **(Characteristics)** Each Reference Train Service:
 - (i) has a maximum Train length, including the locomotives, of 675 metres³;
 - (ii) has two locomotives and 41 wagons;
 - (iii) has a maximum axle load of 15.75 tonne with loading in excess of this maximum axle load dealt with in accordance with the relevant load variation table⁴;
 - (iv) utilises only diesel traction;
 - (v) complies with the maximum speeds permitted on the Nominated Infrastructure as specified by Queensland Rail;

¹ In defining bulk coal, no differentiation is to be made between coal qualities or types, or between the end use markets of the coal.

² Diagrams showing the location of the Nominated Loading Facilities and the Nominated Unloading Facilities will be provided by Queensland Rail to Access Seekers on request.

³ This Train length comprises the following: static train length (which is the straight addition of individual rolling stock lengths) plus an allowance of 2% of this static train length for train handling accuracy and for slack movement in drawgear (includes free slack in the drag box, compression of the draftgear, clearance/free slack due to coupler wear and pin clearance at the yoke).

⁴ As published by Queensland Rail in relation to the Reference Train Service or a Train Service of the same type as the Reference Train Service that identifies allowable overloads for wagons and bogies and specifies relevant Operational Constraints and additional charges, where applicable, for such overloads.

- (vi) complies with the Interface Standards applicable to the Nominated Infrastructure;
 - (vii) is otherwise compatible with the Nominated Infrastructure and requires no additional expenditure by Queensland Rail to implement varied Below Rail controls identified in the IRMP;
 - (viii) operates in accordance with nominated sectional running times specified by Queensland Rail for that Reference Train Service;
 - (ix) has a Loading Time that does not exceed the relevant time specified in **clause 2.2(a)** provided that the Nominated Loading Facility is available for use by the Reference Train Service when that Reference Train Service arrives at the Nominated Loading Facility;
 - (x) has an Unloading Time that does not exceed the relevant time specified in **clause 2.2(b)** provided that the Nominated Unloading Facility is available for use by the Reference Train Service when that Reference Train Service arrives at the Nominated Unloading Facility;
 - (xi) operates with an empty Train on the return journey from the relevant Nominated Unloading Facility to the relevant Nominated Loading Facility;
 - (xii) has the ability to operate on the configuration of the Nominated Infrastructure existing at the Approval Date without limiting the ability of existing Train Services to operate in accordance with their Train Service Entitlements and does not require any Additional Capacity;
 - (xiii) utilises bottom dump wagons with the “KWIK DROP” door operating mechanism suitable for use on the West Moreton System or Metropolitan Region; and
 - (xiv) utilises measures to minimise coal spillage and/or leakage en route that are reasonable, having regard to the practices existing at the Approval Date.
- (d) **(Dangerous Goods)** The Reference Train Service does not carry any Dangerous Goods.
- (e) **(Below Rail Services)** The Reference Train Service:
- (i) only requires services from Queensland Rail that are Below Rail Services; and
 - (ii) assumes Below Rail Services comprised in Access are provided in accordance with this Undertaking.
- (f) **(Conditions of Access)** The Reference Train Service will operate in accordance with the terms and conditions of a Standard Access

Agreement applicable to coal carrying Train Services in the West Moreton System or Metropolitan Region.

- (g) **(Train Service Entitlement)** The Train Service Entitlement for the Reference Train Service will be:
- (i) based on its Trains being available for operation 24 hours per day and 365 days per year; and
 - (ii) specified in terms of Timetabled Service and will comply with the applicable corridor scheduling procedures.

2.2 Loading and unloading facilities

- (a) The Nominated Loading Facilities (together with loading times) are the loading facilities for coal at the following locations:

Nominated Loading Facility locations	Loading Time (hours)
Ebenezer	2
Jondaryan (New Acland)	2
Macalister (Wilkie Creek)	2.5
Columboola (Cameby Downs)	1.7

- (b) The Nominated Unloading Facilities (together with unloading times) are the unloading facilities for coal at the following locations:

Nominated Unloading Facility locations	Unloading Time (hours)
Fisherman Islands coal loader	1.9

3 Reference Tariffs

3.1 Calculation of the Reference Tariffs

- (a) The applicable Reference Tariff for a Reference Train Service will be calculated as follows:
- (i) for a Reference Train Service that uses the Nominated Loading Facility at Ebenezer:

$$\left(AT_1 \times \frac{gtk}{1000} \right) + (QCALevy \times nt)$$

- (ii) for a Reference Train Service that uses a Nominated Loading Facility at Jondaryan (New Acland), Macalister (Wilkie Creek) or Columboola (Cameby Downs):

$$\left(AT_1 \times \frac{gtk}{1000} \right) + (AT_2 \times rtp) + (QCALevy \times nt)$$

where:

AT₁ is the variable part of the Reference Tariff that is levied on a gross tonne kilometre basis specified as such under **clause 3.1(e)** for the relevant Reference Train Service;

AT₂ is the fixed part of the Reference Tariff that is levied on a reference Train Path basis specified as such under **clause 3.1(e)** for the relevant Reference Train Service,

provided that the above calculation is subject to the addition from time to time of any applicable Adjustment Charge (including, if necessary, on a pro rata basis with other Reference Train Services that have the same origin and destination and Access Holder and are run during the same billing period, as the relevant Reference Train Service) and any applicable Take or Pay Charge.

- (b) For the purposes of the calculation under **clause 3.1(a)**, the amounts of AT₁, AT₂, the QCA Levy, any Adjustment Charge and any Take or Pay Charge are GST exclusive. An Access Charge calculated based on a Reference Tariff will have an amount for GST added to it.
- (c) For the purposes of this **schedule A**, a Train Service is a one way Train Service, that is, the journey from the Nominated Loading Facility to the Nominated Unloading Facility is one Train Service, and the return journey from the Nominated Unloading Facility to the Nominated Loading Facility is a second Train Service.
- (d) For the purposes of **clause 3.1(a)**, gtk will be assessed for the relevant Train Service over the billing period for the Access Charge which is based on the Reference Tariff being calculated.
- (e) The amount of the Reference Tariff inputs are as follows:

- (i) for a Reference Train Service to or from the Nominated Loading Facility at Ebenezer:

Reference Tariff Input	\$
AT ₁	22.22
QCA Levy	0.02720

- (ii) for a Reference Train Service to or from a Nominating Loading Facility at Jondaryan (New Acland), Macalister (Wilkie Creek) or Columboola (Cameby Downs):

Reference Tariff Input	\$
AT ₁	11.11
AT ₂	5,449.78
QCA Levy	0.02720

3.2 Escalation of Reference Tariffs

- (a) Each Reference Tariff input specified in **clause 3.1(e)**, except the QCA Levy, will automatically escalate annually on each Escalation Date commencing on the First Escalation Date in accordance with the following formula:

$$AT_n = AT_{n-1} \times \left(\frac{CPI_n}{CPI_{n-1}} \right)$$

where:

- AT_n** means the value of the relevant Reference Tariff input to apply after escalation;
- AT_{n-1}** means the escalated value of the relevant Reference Tariff input immediately prior to the relevant Escalation Date or, for the First Escalation Date, means the relevant Reference Tariff input referred to in **clause 3.1(e)**;
- CPI_n** means the CPI for the Quarter which commenced six months prior to the Escalation Date for which the variable AT_n is being determined; and
- CPI_{n-1}** means the CPI for the Quarter which commenced 18 months prior to the Escalation Date for which the variable AT_n is being determined.
- (b) Queensland Rail will publish the escalated inputs of the Reference Tariff on its website within five Business Days after each Escalation Date commencing with the First Escalation Date.
- (c) Where an error has been made in the calculation of the escalated inputs of a Reference Tariff, Queensland Rail will correct the error so that the relevant inputs of the Reference Tariff are escalated in accordance with **clause 3.2(a)**.
- (d) For clarity, if:
- (i) the basis of assessment of the CPI is altered in a material way; or
 - (ii) the CPI ceases (or is likely to cease) to be:
 - (A) published; or
 - (B) published at sufficiently regular intervals for the purpose of the calculation in **clause 2.1** of this **schedule 3**,

Queensland Rail may submit a draft amending access undertaking to the QCA in relation to the amendment or replacement of the CPI.

4 Take or pay

- (a) The revenue that Queensland Rail is entitled to earn in relation to Reference Train Services includes Take or Pay Charges in accordance with this **clause 4**.
- (b) Take or Pay Charges will be determined for:
- (i) each Year during which the relevant Train Services are entitled to operate; or
 - (ii) the relevant part of a Year, if the relevant Train Services were only entitled to operate for part of the first or last Year during the term of the relevant Access Agreement because that entitlement commenced on a date other than 1 July or expired or terminated on a date other than 30 June,

(Take or Pay Period) and invoiced for each Take or Pay Period after the end of that Take or Pay Period.

- (c) The amount of the Take or Pay Charges for a Take or Pay Period will be the amount which is 80% of the amount calculated for that Take or Pay Period as follows:

$$\left(\left(AT_1 \times \frac{gtk}{1000} \right) + AT_2 \right) * NTNO$$

where:

- (i) AT_1 and AT_2 are the Reference Tariff inputs applicable on the last day of that Take or Pay Period;
- (ii) gtk is the average gtk for the relevant Train Services calculated using a nominal payload as determined by Queensland Rail (acting reasonably); and
- (iii) $NTNO$ means the number of relevant individual Train Services that were entitled to be operated for the Take or Pay Period in accordance with the relevant Train Service Entitlement and did not operate (excluding Train Services that did not operate due to Queensland Rail Cause),

provided always that the amount of Take or Pay Charges for a Take or Pay Period will not be less than zero.

- (d) When invoicing Take or Pay Charges, Queensland Rail will also include information on how the Take or Pay Charge was determined.

5 Variation of Reference Tariffs

5.1 Obligation to submit a variation

- (a) Queensland Rail:

- (i) may submit a variation of a Reference Tariff to the QCA, if Queensland Rail considers that the variation will promote efficient investment in the coal transport supply chain in the West Moreton System or Metropolitan Region; or
- (ii) will submit a variation of a Reference Tariff to the QCA, subject to **clause 5.1(c)** within three months after:
 - (A) Queensland Rail becomes aware that an Endorsed Variation Event, or a Review Event, has occurred; or
 - (B) a written notice being given to Queensland Rail by the QCA in accordance with **clause 5.1(b)**.
- (b) The QCA may give Queensland Rail a written notice requiring it to submit a variation of a Reference Tariff if it has failed to submit a variation of a Reference Tariff under **clause 5.1(a)(ii)(A)** in respect of an Endorsed Variation Event.
- (c) The QCA may grant Queensland Rail an extension of the time for submitting, or resubmitting, a variation of a Reference Tariff if:
 - (i) Queensland Rail requests an extension of time; and
 - (ii) the extension of time is reasonable or necessary.

If the QCA grants Queensland Rail an extension of time under this **clause 5.1(c)**, Queensland Rail must submit or resubmit the variation of a Reference Tariff within the time specified by the QCA.

5.2 Development of Reference Tariff variation by the QCA

The QCA may develop a variation of a Reference Tariff that is consistent with the requirements under this **clause 5** for such a variation:

- (a) if Queensland Rail does not comply with a written notice given by the QCA under **clause 5.1(b)** or **5.4(c)(ii)** for it to submit, or resubmit, a variation of a Reference Tariff; or
- (b) if the QCA refuses to approve a variation of a Reference Tariff resubmitted by Queensland Rail in accordance with a notice given by the QCA under **clause 5.4(c)(ii)**.

5.3 Requirements for Reference Tariff variation

- (a) A variation of a Reference Tariff submitted by Queensland Rail in accordance with **clause 5.1(a)** must:
 - (i) nominate the Reference Tariff to be varied;
 - (ii) include details of the methodology, data and assumptions used to vary the Reference Tariff;
 - (iii) if the variation is submitted under **clause 5.1(a)(i)**, include information on:

- (A) the matters set out in **clause** Error! Reference source not found. of Error! Reference source not found. of this Undertaking; and
 - (B) why Queensland Rail considers that the variation of the Reference Tariff will promote efficient investment in the coal transport supply chain in the West Moreton System or Metropolitan Region; and
 - (iv) if the variation is submitted under **clause 5.1(a)(ii)(A)**, include evidence that the Endorsed Variation Event or Review Event has occurred.
- (b) If the QCA considers it appropriate, the QCA may publish details of Queensland Rail's proposed variation of a Reference Tariff and invite and consider comments from stakeholders regarding that proposed variation (provided that Queensland Rail must be given a reasonable period in which to respond to the QCA in respect of any such comments).

5.4 Decision to approve or refuse to approve variation

- (a) The QCA may approve a variation of a Reference Tariff submitted by Queensland Rail in accordance with **clause 5.1(a)** if the QCA is satisfied:
 - (i) for a variation submitted under **clause 5.1(a)(i)**, that the variation is consistent with the Undertaking;
 - (ii) for a variation submitted in respect of an Endorsed Variation Event or Review Event (**Event**):
 - (A) the Event has occurred;
 - (B) the variation has been calculated as if all other Reference Tariffs were also being recalculated due to the occurrence that caused the Event; and
 - (C) the variation:
 - (1) is consistent with the change in the cost resulting from or that will result from the Event; and
 - (2) reflects the impact of the relevant Event on the financial position of Queensland Rail (including the impact of incremental maintenance and incremental capital costs).
- (b) If the QCA approves a variation to a Reference Tariff:
 - (i) it will give Queensland Rail a notice in writing stating the reasons for its decision;

- (ii) the variation will apply:
 - (A) from the first day of the month immediately following the date of the occurrence of the Endorsed Variation Event or Review Event (as applicable); or
 - (B) where the date of the occurrence of the Endorsed Variation Event or Review Event is the first day of a month, from that date; and
- (iii) Queensland Rail must:
 - (A) publish details of the variation on its website; and
 - (B) advise Access Holders and Access Seekers, in relation to the relevant Reference Train Service, of the variation.
- (c) If the QCA refuses to approve a variation to a Reference Tariff, it will give Queensland Rail a written notice:
 - (i) stating the reasons for its refusal and the way it considers that the variation should be amended; and
 - (ii) if that variation was required to be submitted by Queensland Rail in relation to an Endorsed Variation Event, requiring Queensland Rail to:
 - (A) vary the Reference Tariff in the way the QCA considers it appropriate; and
 - (B) resubmit the variation to the QCA,

within 20 Business Days after Queensland Rail receives the notice issued to Queensland Rail under this **clause 5.4(c)**.
- (d) Queensland Rail will comply with a notice given under **clause 5.4(c)(ii)**.
- (e) The QCA may approve a variation to a Reference Tariff that was:
 - (i) resubmitted under **clause 5.4(c)(ii)**; or
 - (ii) developed by the QCA under **clause 5.2**,
 - (iii) if the QCA is satisfied that the variation of the Reference Tariff:
 - (iv) is consistent with the matters specified under **clause 5.4(a)** (provided that for the purposes of so applying **clause 5.4(a)** the relevant variation will be treated as though it was submitted by Queensland Rail under the relevant provision in **clause 5.1(a)**); and
 - (v) if **clause 5.4(e)(i)** applies, is consistent with the relevant notice given by the QCA under **clause 5.4(c)**.
- (f) If the QCA refuses to approve a variation to a Reference Tariff that was resubmitted under **clause 5.4(c)(ii)**, the QCA will give Queensland Rail a notice in writing stating the reasons for its refusal.

6 Adjustment Charges

6.1 Recovery or reimbursement of Adjustment Charges

- (a) If:
- (i) this Undertaking specifies that a Reference Tariff is applicable or effective from a date prior to the QCA's approval of that Reference Tariff; or
 - (ii) the QCA approves a variation of a Reference Tariff and that variation applies from or takes effect on a date prior to the QCA's approval of the variation,

Queensland Rail is entitled to recover from or will reimburse to, as applicable, each relevant Access Holder the amount (**Adjustment Amount**) which is the sum of:

- (iii) the aggregate of the differences, for each relevant Access Holder for each month (or part thereof) since the date on which the Reference Tariff or the variation of the Reference Tariff was to apply or take effect (**Effective Date**) until the date on which that Reference Tariff was approved by the QCA or the date on which the variation of the Reference Tariff was approved by the QCA, as applicable, between:
 - (A) the Access Charges paid or payable by that Access Holder in respect of the Train Services operated by or for that Access Holder during that month (or part thereof); and
 - (B) the Access Charges that would have been paid or payable by that Access Holder in respect of those Train Services if the Access Charges were calculated in accordance with the Reference Tariffs or the variation of Reference Tariffs referred to in **clause 6.1(a)(i)** or **(ii)** on and from the Effective Date; and
- (iv) the aggregate of the interest calculated in accordance with **clause 6.1(b)** in respect of the amount of each difference comprising the amount calculated in accordance with **clause 6.1(a)(iii)**,

by making adjustments to the Access Charges (**Adjustment Charge**) payable by Access Holders so as to recover or reimburse, as applicable, the Adjustment Amount (subject to the provisions of this Undertaking).

- (b) The interest referred to in **clause 6.1(a)(iv)** must be calculated:
- (i) in respect of the amount of each difference comprising the amount calculated in accordance with **clause 6.1(a)(iii)**;
 - (ii) on the basis that the interest:
 - (A) accrues and is charged from day to day; and

- (B) is capitalised at the end of each month and will thereafter itself bear interest;
- (iii) at the rate equal to, for interest accruing in a month:
 - (A) the mid-point of the one month Bank Bill Swap Rate as published by the Australian Financial Markets Association (or its successor) for the Business Day immediately prior to the 21st day of the previous month; or
 - (B) if that rate is no longer published, the rate will be an appropriate equivalent rate determined by Queensland Rail, acting reasonably; and
- (iv) for the period commencing on the date when the Access Charges paid or payable by the relevant Access Holder used to calculate the applicable difference in accordance with **clause 6.1(a)(iii)(A)** were due and payable and ending on the date when the Adjustment Charge is to be due and payable.

6.2 Obligation to submit Adjustment Charges

Queensland Rail:

- (a) may, if it submits a variation of a Reference Tariff and that variation is proposed to apply or take effect on a date prior to the date on which the QCA will approve the variation; or
- (b) must, if:
 - (i) the QCA approves a variation of a Reference Tariff and that variation applies or takes effect on a date prior to the date on which the QCA approves the variation (and subject to **clause 6.2(a)**); or
 - (ii) this Undertaking specifies that a Reference Tariff is applicable or effective from a date prior to the QCA's approval of that Reference Tariff,

submit to the QCA proposed Adjustment Charges.

6.3 Requirements for Adjustment Charge submission

- (a) Where Queensland Rail submits proposed Adjustment Charges to the QCA in accordance with **clause 6.2**, Queensland Rail's submission must, without limitation:
 - (i) identify, subject to **clause 6.3(b)**, the Access Holders to which the proposed Adjustment Charges will apply;
 - (ii) set out the proposed Adjustment Charges for each Access Holder including details of how those proposed Adjustment Charges were calculated; and
 - (iii) indicate the billing period(s) in respect of which the proposed Adjustment Charges are to be applied.

- (b) For the purposes of **clause 6.3(a)(i)**:
 - (i) an Adjustment Charge may only apply to an Access Holder (**New Access Holder**) that did not run the Train Services to which that Adjustment Charge relates (**Past Train Services**) if:
 - (A) the Access Holder who ran the Past Train Services no longer has (or, at the time when the Adjustment Charges are to be applied, will have ceased to have) a rail haulage agreement with the Customer for the Past Train Services in respect of Train Services with the same origin and destination as the Past Train Services;
 - (B) the New Access Holder has a rail haulage agreement with the Customer referred to in **clause 6.3(b)(i)(A)** (including that Customer's successors and assigns) in respect of Train Services with the same origin and destination as the Past Train Services or the New Access Holder was that Customer (or is that Customer's successor or assign); and
 - (C) the New Access Holder has been granted Access Rights with the same origin and destination as the Past Train Services; and
 - (ii) no Adjustment Charge will apply to an Access Holder who ran the Past Train Services if that Access Holder has, at the time when the Adjustment Charges are to be applied, ceased to have a rail haulage agreement with the Customer for the Past Train Services (including that person's successors and assigns) in respect of Train Services with the same origin and destination as the Past Train Services provided that with the cessation of that rail haulage agreement, the applicable Access Rights were either relinquished or expired.
- (c) If the QCA considers it appropriate, the QCA may publish details of Queensland Rail's submission of proposed Adjustment Charges and invite and consider comments from stakeholders regarding the proposed Adjustment Charges (provided that, to the extent that stakeholders provide comments, Queensland Rail must be given a reasonable period in which to provide a response to those comments to the QCA).

6.4 Decision to approve or refuse to approve variation

- (a) Where Queensland Rail submits proposed Adjustment Charges to the QCA in accordance with **clause 6.2**, the QCA must approve:
 - (i) the Access Holders to which the Adjustment Charges will apply;
 - (ii) the Adjustment Charges that are to apply to each Access Holder; and
 - (iii) the billing period(s) in respect of which the Adjustment Charges will be applied,

if the proposed Adjustment Charges (excluding any interest component) are reasonable to recover or reimburse, as applicable, any under or over recovery of Access Charges that relate to each Access Holder and, where **clause 6.1(b)(iii)(B)** applies, the QCA is satisfied that Queensland Rail has acted reasonably in selecting an appropriate equivalent rate in accordance with that provision.

- (b) If the QCA refuses to approve the proposed Adjustment Charges, the QCA must give Queensland Rail a notice in writing:
 - (i) stating the reasons for its refusal and the way in which the QCA considers the proposed Adjustment Charges should be amended so as to constitute (excluding any interest component) a reasonable recovery or reimbursement, as applicable of any under or over recovery of Access Charges by Queensland Rail that relate to each Access Holder; and
 - (ii) requiring Queensland Rail to vary the proposed Adjustment Charges in the way the QCA considers it appropriate and resubmit the amended proposal to the QCA within 20 Business Days after Queensland Rail receives the notice.
- (c) Queensland Rail must comply with a notice given under **clause 6.4(b)**.
- (d) The QCA must approve a resubmitted proposal for Adjustment Charges, if the resubmitted proposal has been amended or developed in accordance with the QCA's notice given under **clause 6.4(b)**.
- (e) Queensland Rail must comply with an approval of the QCA given in accordance with **clause 6.4(a)** or **(d)** including in applying the Adjustment Charge approved for each Access Holder to the calculation of Access Charges payable by that Access Holder.

6.5 Review of Access Charges to provide for Adjustment Charges

The calculation of Access Charges under an Access Agreement must be reviewed and varied to provide for the payment of Adjustment Charges approved by the QCA in accordance with **clause 6.4(a)** or **(d)** by the relevant Access Holder including that:

- (a) the Access Charges payable by the Access Holder must include any applicable Adjustment Charge approved by the QCA from time to time in relation to or in connection with:
 - (i) any variation of a Reference Tariff approved by the QCA to apply or take effect on a date prior to the date on which the QCA approves the variation; or
 - (ii) any Reference Tariff that the Undertaking states is applicable or effective from a date prior to the date on which that Reference Tariff was approved by the QCA; and
- (b) an Adjustment Charge so determined by the QCA must be applied to the calculation of the amount of the invoice for charges payable by the

Access Holder under the Access Agreement for the relevant billing period.

7 Variations to Reference Train Service

- (a) A varied Access Charge will be applicable to a Train Service that:
- (i) varies from the Reference Train Service characteristics specified in **clauses 2.1(c) to (e)**; or
 - (ii) operates under terms and conditions with agreed variations from the requirements of **clauses 2.1(f) and (g)**,

but otherwise satisfies the nominated Reference Train Service description, so that the varied Access Charge varies from the applicable Reference Tariff due to differences in cost or risk to Queensland Rail of providing Access for that Train Service compared to the Reference Train Service.

- (b) Where a Train Service differs from the Reference Train Service due to it not complying with **clause 2.1(c)(viii)**, then Queensland Rail will, unless otherwise agreed with the QCA, quote an Access Charge that varies from the Reference Tariff by applying the following principles:

- (i) the number of reference Train Paths used by the proposed Train Service will be determined as follows:

$$\text{rtp} = \max[(A/B), (B/A)]$$

where:

A is the maximum number of Reference Train Services at full utilisation; and

B is the maximum number of the proposed Train Services at full utilisation;

provided that if:

(A) the maximum number of proposed Train Services at full utilisation exceeds the maximum number of Reference Train Services at full utilisation; and

(B) the scheduled section running times of the proposed Train Service are the same as the nominated section running times for the Reference Train Service,

then rtp is deemed to be one; and

- (ii) the maximum number of Train Paths available for a Reference Train Service and for the proposed Train Service will be determined using a readily available simulation package.

Attachment 4: New Schedule AA

Schedule AA

Regulatory Asset Base

1 Maintenance of Regulatory Asset Base

1.1 Roll forward principles

On an annual basis, Queensland Rail will roll forward the asset values in its Regulatory Asset Base, applying the following principles:

- (a) the opening asset value will be indexed for the Year using CPI;
- (b) depreciation of the assets will be calculated for the Year using asset lives and a depreciation profile endorsed by the QCA;
- (c) the value of asset disposals and transfers during the Year will be subtracted from the Regulatory Asset Base;
- (d) capital expenditure will be added to the Regulatory Asset Base, where that capital expenditure is accepted into the Regulatory Asset Base by the QCA in accordance with **clause 2.1**; and
- (e) the value of the assets in the Regulatory Asset Base will be adjusted in accordance with **clause 1.2**.

1.2 Adjusting the value of assets in the Regulatory Asset Base

- (a) The value of assets contained in the Regulatory Asset Base may be increased by Queensland Rail by including:
 - (i) at the end of the Term the value of intangible assets that were not included in the initial valuation of assets contained in the Regulatory Asset Base; or
 - (ii) the Depreciated Optimised Replacement Cost of additional sections of the Network incorporated into the West Moreton System,provided that the increase in asset value must first be accepted by the QCA.
- (b) The QCA will not require the value of assets contained in the Regulatory Asset Base to be reduced unless:
 - (i) the QCA made its decision to accept the capital expenditure in the Regulatory Asset Base on the basis of information provided by Queensland Rail that Queensland Rail knew, or should have known, was false or misleading at the time it provided the information; or
 - (ii) circumstances arise in the future where demand for Access has deteriorated to such an extent that regulated prices based on an

unoptimised asset value would result in a further decline in demand for Access.

1.3 Capital expenditure report

- (a) Unless otherwise agreed between Queensland Rail and the QCA, Queensland Rail will, within four months after the end of each Year in the Term, provide to the QCA the following details for capital expenditure in the subject Year that Queensland Rail considers should be included in the Regulatory Asset Base:
 - (i) the name of the project;
 - (ii) the location of the project;
 - (iii) the amount of the capital expenditure; and
 - (iv) information, where applicable, to support the QCA's assessment of the prudence of the capital expenditure under **clauses 2 to 5** (except to the extent that the QCA has already accepted that capital expenditure as prudent in scope, standard or cost).
- (b) If the information set out in a report provided to the QCA under this **clause 1.3** is insufficient, the QCA may request additional relevant information in accordance with **clause 2.2(b)**.
- (c) Information provided to the QCA under this **clause 1.3** (including in response to a request under **clause 2.2(b)**):
 - (i) will be accompanied by a statement signed by Queensland Rail's Chief Executive Officer confirming that information is, in all material respects, correct; and
 - (ii) must be kept confidential and not published by the QCA except to the extent that Queensland Rail agrees otherwise.

1.4 Regulatory Asset Base roll forward report to the QCA

- (a) Unless otherwise agreed between Queensland Rail and the QCA, to the extent that the QCA, under **clause 2.1**, has accepted the capital expenditure into the Regulatory Asset Base, Queensland Rail will, within four weeks after that acceptance, provide to the QCA Queensland Rail's roll-forward of the Regulatory Asset Base under **clause 1.1**, subject to **clause 1.2**, including details of:
 - (i) the opening value of the Regulatory Asset Base for the relevant Year;
 - (ii) indexation of the Regulatory Asset Base;
 - (iii) depreciation of the Regulatory Asset Base;
 - (iv) capital expenditure that is included in the Regulatory Asset Base;
 - (v) disposals and transfers from the Regulatory Asset Base; and

- (vi) the closing value of the Regulatory Asset Base for the relevant Year (which will be the opening value of the Regulatory Asset Base for the following Year),
separately reported for Rosewood to Macalister and Macalister to Columboola.
- (b) Information provided to the QCA under this **clause 1.4**:
 - (i) will be accompanied by a statement signed by Queensland Rail's Chief Executive Officer confirming that information is, in all material respects, correct;
 - (ii) must be kept confidential and not published by the QCA except to the extent that Queensland Rail agrees otherwise; and
 - (iii) must be based on the roll forward principles in **clause 1.1**.

2 Acceptance of capital expenditure into the Regulatory Asset Base

2.1 Requirements for acceptance of capital expenditure into the Regulatory Asset Base

- (a) The QCA will accept capital expenditure into the Regulatory Asset Base if that capital expenditure:
 - (i) is or has been accepted as:
 - (A) prudent in scope in accordance with **clause 3**;
 - (B) prudent in the standard of works in accordance with **clause 4**; and
 - (C) prudent in cost in accordance with **clause 5**; and
 - (ii) has been incurred and either the capital expenditure project has been commissioned or formally discontinued.
- (b) The QCA must notify Queensland Rail in writing if it accepts capital expenditure into the Regulatory Asset Base.
- (c) If the QCA is considering refusing to accept all or part of any capital expenditure into the Regulatory Asset Base:
 - (i) the QCA must give Queensland Rail a draft of the QCA's decision (including a statement of reasons and the way it considers the capital expenditure should be adjusted);
 - (ii) Queensland Rail may, within 20 Business Days after being given that draft decision (or such longer period as agreed by the QCA), revise the capital expenditure and/or provide additional information supporting its view that the capital expenditure should be included in the Regulatory Asset Base; and

- (iii) the QCA must consider that revision and/or additional information when deciding whether to accept or refuse to accept the capital expenditure into the Regulatory Asset Base.
- (d) If the QCA refuses to accept all or part of any capital expenditure into the Regulatory Asset Base, the QCA must give Queensland Rail a notice of the QCA's decision (including a statement of reasons).
- (e) If Queensland Rail does not obtain the QCA's acceptance of any matters under **clauses 3 to 5** in relation to a capital expenditure project at any time, then this does not affect its right to seek any such acceptance under **clauses 3 to 5** at a later time.
- (f) For the avoidance of doubt, the Capital Indicator does not imply any acceptance by the QCA of that level of capital expenditure into the Regulatory Asset Base.

2.2 Assessing prudence of capital expenditure

For the purposes of **clauses 3, 4 and 5**:

- (a) the QCA must:
 - (i) in assessing whether capital expenditure is prudent:
 - (A) only consider information available, or reasonably available, to Queensland Rail at the time of making the investment decision; and
 - (B) as it considers necessary, take advice from independent advisors using appropriate benchmarks and experience, provided that it gives Queensland Rail a copy of that advice as soon as reasonably practicable and in any event no later than with its notice under **clause 2.2(a)(ii)**; and
 - (ii) give Queensland Rail a notice of any determination that it makes under **clauses 3, 4 or 5** (as applicable) and, if that determination is a refusal to accept anything (in whole or part), that notice must state the reasons for that refusal;
- (b) the QCA may request additional information from Queensland Rail that is reasonably required to make any determination under **clauses 3, 4 or 5** (as applicable) within 45 Business Days after receiving the request from Queensland Rail to make such a determination under **clauses 3, 4 or 5** (as applicable);
- (c) Queensland Rail must respond to a request by the QCA under **clause 2.2(b)** within 30 Business Days after receiving that request; and
- (d) if the QCA has not notified Queensland Rail of any determination that it is required to make under **clauses 3, 4 or 5** (as applicable) within 45 Business Days after:

- (i) where the QCA has not made a request under **clause 2.2(b)**, receiving a request from Queensland Rail under **clauses 3, 4 or 5** (as applicable) to make such a determination; or
- (ii) where the QCA has made a request under **clause 2.2(b)**, receiving additional information from Queensland Rail reasonably required to make any determination under **clauses 3, 4 or 5** (as applicable) as requested by the QCA,

then the QCA is taken to have made a determination to accept Queensland Rail's request.

3 Prudency of scope

3.1 Assessment of prudency of scope

- (a) Assessing the prudency of scope of works for a capital expenditure project involves assessing whether the works are reasonably required.
- (b) The QCA's acceptance of the prudency of scope for a capital expenditure project may be requested at any time including prior to the capital expenditure being incurred.

3.2 Process for acceptance of prudency of scope

- (a) Queensland Rail may request the QCA to, and the QCA will, accept the scope of a capital expenditure project as prudent if it is Customer or Access Holder specific capital expenditure (provided it is an Access Holder who has no Customer) for a branch line to a mine which is to be included as a loading point for a Reference Tariff, and the scope of the capital expenditure has been accepted by that Customer or Access Holder.
- (b) If **clause 3.2(a)** does not apply or acceptance is not sought or obtained under **clause 3.2(a)**, Queensland Rail, an Access Seeker, an Access Holder or a Customer may request the QCA's acceptance of the scope of a capital expenditure project as prudent in accordance with **clause 3.2(c)**.
- (c) If a request is made under **clause 3.2(b)**, the QCA will accept the scope of a capital expenditure project as prudent if it is demonstrated to the QCA's reasonable satisfaction, having regard to the factors set out in **clause 3.2(d)**, that:
 - (i) Queensland Rail had reasonable grounds for proceeding with a project given the circumstances relevant at the time the investment decision was made; or
 - (ii) if **clause 3.2(c)(i)** does not apply, reasonable grounds exist for proceeding.
- (d) The factors that the QCA will have regard to for the purposes of **clause 3.2(c)** are:

- (i) the need to accommodate what is reasonably required to comply with Access Agreements;
- (ii) the extent of Reasonable Demand, and the need for new capital expenditure projects to accommodate that demand;
- (iii) the age and condition of existing assets and the need for replacement capital expenditure projects;
- (iv) Queensland Rail's legislative requirements, including relating to workplace health and safety and environmental requirements;
- (v) the appropriateness of Queensland Rail's processes to evaluate and select proposed capital expenditure projects, including the extent to which alternatives are evaluated as part of the process;
- (vi) the extent to which the capital expenditure project was subjected to Queensland Rail's processes to evaluate and select proposed capital expenditure projects; and
- (vii) the extent to which consultation has occurred with relevant stakeholders about the capital expenditure project.

3.3 Excluded Capital Expenditure

- (a) If:
 - (i) the capital expenditure for a capital expenditure project has been incurred by Queensland Rail; and
 - (ii) the QCA, in assessing the prudence of scope of that capital expenditure project for the purposes of **clause 3.2(c)**, determines that the scope of the capital expenditure project is in excess of that needed to accommodate Reasonable Demand,

then the QCA may also determine the element of the prudent costs of the capital expenditure project that was not needed to meet Reasonable Demand (**Excluded Capital Expenditure**).
- (b) If the QCA has determined Excluded Capital Expenditure in respect of a capital expenditure project, then:
 - (i) that Excluded Capital Expenditure will be set aside and escalated at the rate of the WACC from the date of commissioning of the capital expenditure project until the full scope of the capital expenditure project is accepted by the QCA as required to meet Reasonable Demand (whether on one occasion or in parts over time); and
 - (ii) when the QCA accepts that all or part of the excluded aspects of the capital expenditure project are required to meet Reasonable Demand:
 - (A) the QCA will accept all or the relevant part of the Excluded Capital Expenditure into the Regulatory Asset Base at its escalated value; and

- (B) if only part of the Excluded Capital Expenditure is included in the Regulatory Asset Base, **clause 3.3(b)(i)** will continue to apply to the remainder.

4 Prudency of standard of works

4.1 Assessment of prudency of standard of works

- (a) Assessing the prudency of standard of works for a capital expenditure project involves assessing whether the works are of a reasonable standard to meet the requirements of the scope for that capital expenditure project and are not overdesigned such that they are beyond the requirements of that scope.
- (b) The QCA's acceptance of the prudency of standard of works for a capital expenditure project may be requested at any time including prior to the capital expenditure being incurred.

4.2 Process for acceptance of prudency of standard of works

- (a) Queensland Rail may request the QCA's acceptance of the standard of works of a capital expenditure project as prudent in accordance with this **clause 4**.
- (b) If a request is made under **clause 4.2(a)**, the QCA will accept the standard of works of a capital expenditure project as prudent if:
 - (i) it is demonstrated to the QCA's reasonable satisfaction, having regard to the factors set out in **clause 4.2(c)**, that:
 - (A) Queensland Rail had reasonable grounds for its design of the relevant infrastructure given the circumstances relevant at the time that the design was prepared; or
 - (B) if Queensland Rail is yet to proceed with the project, reasonable grounds exist for the design of the relevant infrastructure; or
 - (ii) the proposed works are consistent in all material respects with the existing standard and configuration of adjacent infrastructure or existing infrastructure with similar usage levels, or its modern engineering equivalent, to the extent that the standard of the adjacent or existing infrastructure has previously been accepted by the QCA as being reasonable.
- (c) The factors that the QCA will have regard to for the purposes of **clause 4.2(b)(i)** are:
 - (i) the requirements of Operators and what is reasonably required to comply with Access Agreements;
 - (ii) current and likely future usage levels;

- (iii) the requirements of the codes developed by the Rail Industry Safety And Standards Board (RISSB) Limited ACN 105 001 465 in relation to the standards required for rail infrastructure in Australia;
- (iv) the requirements of other relevant Australian design and construction standards;
- (v) Queensland Rail's design standards contained within the Safety Management System; and
- (vi) all relevant Law and the requirements of any Authority (including the Safety Regulator).

5 Prudency of costs

5.1 Assessment of prudency of costs

- (a) Assessing the prudency of costs for a capital expenditure project involves assessing whether the costs are reasonable for the scope and standard of work done or to be done.
- (b) The QCA's acceptance of the prudency of costs for a capital expenditure project may be requested at any time (including, for the purposes of **clause 5.2**, prior to the capital expenditure being incurred.

5.2 Process for acceptance of prudency of costs where there is an approved procurement strategy

- (a) If the QCA has approved a procurement strategy for a capital expenditure project under **clause 6.1(b)**, Queensland Rail may request the QCA's acceptance of the costs of that capital expenditure project as prudent in accordance with this **clause 5.2**.
- (b) If a request is made under **clause 5.2(a)**, the QCA will accept as prudent:
 - (i) the value of a contract if:
 - (A) the QCA is satisfied that contract provisions regarding contract variations and escalation accord with good commercial practice; and
 - (B) the auditor engaged in accordance with **clause 6.2** certifies that the tender for the contract has been conducted in accordance with the approved procurement strategy;
 - (ii) where the value of a contract has been accepted as prudent in accordance with **clause 5.2(b)(i)**, the value of variations and/or escalations under that contract if:
 - (A) the contract has been managed in accordance with the approved procurement strategy;
 - (B) the auditor engaged in accordance with **clause 6.2** has certified that the contract variations and/or escalations have

been handled in a manner consistent with the relevant contract provisions; and

- (C) the QCA is satisfied that the cost of contract variations and/or escalations is otherwise appropriate, having regard to whether:
 - (1) adequate consideration was given to properly managing the risk of contract variations and/or escalation or the allocation of potential risks during the awarding and management of the contract;
 - (2) the contract has been appropriately managed having regard to the matters in **clause 6.1(c)(iv)**; and
 - (3) the contract has been managed with regard to a prudent balance between costs, schedule and minimising disruption to Committed Capacity during construction; and
- (iii) all costs, paid for by or incurred by Queensland Rail, that Queensland Rail can demonstrate were prudently paid for or incurred and solely and directly related to complying with **clause 6**.

5.3 General process for acceptance of prudence of costs

- (a) If **clause 5.2** does not apply or acceptance is not sought or obtained under **clause 5.2**, Queensland Rail may request the QCA's acceptance of the costs of a capital expenditure project as prudent in accordance with this **clause 5.3**.
- (b) If a request is made under **clause 5.3(a)**, the QCA will accept the costs of a capital expenditure project as prudent if the costs are reasonable for the scope and standard of works undertaken having regard to the matters set out in **clause 5.3(c)** given the circumstances relevant at the time when the costs were incurred or the capital expenditure project was undertaken (as applicable).
- (c) The factors that the QCA will have regard to for the purposes of **clause 5.3(b)** are:
 - (i) the level of such costs relative to the scale, nature, cost and complexity of the project;
 - (ii) the circumstances prevailing in the markets for:
 - (A) engineering, equipment supply and construction;
 - (B) labour; and
 - (C) materials;
 - (iii) where the QCA has approved a procurement strategy for the capital expenditure project under **clause 6.1(b)**, the extent to which Queensland Rail has achieved compliance with that procurement strategy; and

- (iv) the manner in which the capital expenditure project has been managed by Queensland Rail given the circumstances at the time when relevant management decisions and actions were made or undertaken, including Queensland Rail's balancing of:
 - (A) safety during construction and operation;
 - (B) compliance with environmental requirements during construction and operation;
 - (C) compliance with Laws and the requirements of Authorities;
 - (D) minimising disruption to the operation of Train Services during construction;
 - (E) accommodating reasonable requests of Access Holders (and, if applicable, their Customers) to amend the scope and sequence of works undertaken to suit their needs;
 - (F) minimising whole of asset life costs including future maintenance and operating costs;
 - (G) minimising total project cost which may at times not be consistent with minimisation of individual contract costs;
 - (H) aligning other elements in the supply chain; and
 - (I) meeting contractual timeframes and dealing with external factors.

6 Approval of a procurement strategy

6.1 Process for the approval of a procurement strategy

- (a) Where the QCA has approved the scope of a capital expenditure project as prudent in accordance with **clause 3**, Queensland Rail may request the QCA's approval of a procurement strategy for all or part of that capital expenditure project.
- (b) If a request is made under **clause 6.1(a)**, the QCA will approve Queensland Rail's procurement strategy if the QCA is satisfied that the procurement strategy:
 - (i) is in accordance with good industry practice;
 - (ii) will generate an efficient and competitive outcome;
 - (iii) will avoid conflict of interest or collusion amongst tenderers;
 - (iv) is prudent in the circumstances of the capital expenditure project (including having regard to:
 - (A) the factors set out in **clause 6.1(c)**; and
 - (B) whether the procurement strategy tends to assist in achieving the requirements for prudence of costs set out in **clause 5.3**); and

- (v) will avoid unreasonable exposure to contract variation claims.
- (c) The factors that the QCA will have regard to for the purposes of **clause 6.1(b)(iv)(A)** are whether in the procurement strategy:
 - (i) there is a clear process for the calling of tenders, including having clear specifications for tenders, and processes for mitigating conflicts of interest (except when it is assessed that calling tenders is likely to be less advantageous than an alternative means of negotiating a contract);
 - (ii) there is a tender assessment process which contains clear and appropriate processes for determining the successful tender, with any decisions to approve a tender that is not the lowest tender being appropriately justified and documented;
 - (iii) the basis of payment for works is clearly specified and the basis for undertaking the works is in accordance with good commercial practice;
 - (iv) there is a process for managing contracts before and after award that accords with good commercial practice for a project of the type and scale of the capital expenditure project and provides appropriate guidance on the criteria that Queensland Rail should apply to decisions regarding the management of the capital expenditure project, including:
 - (A) safety during construction and operation;
 - (B) compliance with environmental requirements during construction and operation;
 - (C) minimising disruption to Committed Capacity during construction;
 - (D) accommodation of the reasonable requests of Access Holders and, if applicable, their Customers to change the scope and sequence of construction to suit their needs;
 - (E) a prudent balance between:
 - (1) a higher price in return for more certainty as to final cost;
 - (2) a lower price accepting that final cost may be less certain; and
 - (3) costs, schedule and minimising disruption to Committed Capacity during construction;
 - (F) minimising whole of asset life costs including future maintenance and operating costs;
 - (G) minimising total project cost which may at times not be consistent with minimisation of individual contract costs;

- (v) there is a process for managing contract variations and/or escalation that occurs post award of a contract, requiring that reasonable consideration be given to managing the risk of contract variations and/or escalation and the allocation of potential risks during the management of the contract and requiring the provision of clear documentary evidence regarding the nature and reasonableness of any variation and/or escalation; and
 - (vi) Queensland Rail has engaged an auditor in accordance with **clause 6.2** to monitor compliance with the procurement strategy.
- (d) The QCA will give Queensland Rail a notice in writing regarding:
- (i) whether the procurement strategy is approved; and
 - (ii) if the QCA decides not to approve the procurement strategy (in whole or part) the reasons for its refusal and the way the processes under the procurement strategy may be amended to obtain the QCA's approval.

6.2 Implementation of approved procurement strategy

As part of the implementation of a procurement strategy approved by the QCA under **clause 6.1**, Queensland Rail will engage an independent external auditor to audit the compliance of Queensland Rail's tender and contract management processes with the approved procurement strategy approved in accordance with the following process:

- (a) Queensland Rail will appoint the auditor, after obtaining the QCA's approval of the auditor (including the terms of engagement);
- (b) the auditor will be required to acknowledge and accept that the auditor owes a separate duty of care to the QCA in the provision of the audit and, in the event of a conflict between the auditor's obligations to Queensland Rail and its duty of care to the QCA, the auditor's duty of care to the QCA will take precedence;
- (c) the auditor must agree the processes for conducting an audit with Queensland Rail (which will consist of a proposed work program, including audit costs, for the execution of the audit);
- (d) Queensland Rail will, within a reasonable time, provide any relevant information the auditor reasonably requires for the purpose of conducting the audit;
- (e) if required by Queensland Rail, the auditor will enter into a confidentiality agreement with Queensland Rail in relation to any information provided by Queensland Rail to the effect that it must keep the information confidential and only use that information for the purpose of conducting the audit and completing the audit report detailed in **clause 6.2(f)** below;

- (f) the auditor will compile an audit report:
 - (i) identifying whether Queensland Rail has complied in all material respects with the approved procurement strategy including in relation to contract variations and/or escalation; and
 - (ii) if the auditor identifies that Queensland Rail has not complied in all material respects with the approved procurement strategy:
 - (A) details on the relevant non-compliance;
 - (B) any reasons stated by Queensland Rail for the relevant non-compliance; and
 - (C) whether the non-compliance was reasonable in the circumstances;
- (g) the auditor will provide to Queensland Rail and the QCA:
 - (i) progress reports on the audit process every six months; and
 - (ii) a copy of the audit report upon completion of the audit (which the QCA may publish if it considers it appropriate); and
- (h) if the QCA considers that any of the auditor's reports (whether progress reports or a final report) are lacking in detail or otherwise deficient, the QCA may direct Queensland Rail to instruct the auditor to review the relevant report and, in doing so, to address the concerns of the QCA.

For the purpose of **clause 5.3**, the costs incurred by Queensland Rail in relation to an external auditor engaged in accordance with this **clause 6.2** will form part of the capital expenditure for the relevant capital expenditure project and the QCA will accept those costs as prudent.

7 Capital Expenditure Carryover Account

- (a) Queensland Rail will maintain a register in which it will annually record all Approved Capital Expenditure (including identifying the relevant capital expenditure by project).
- (b) If, at the end of each Year, the Approved Capital Expenditure differs from the Capital Indicator, the difference will be entered in the Capital Expenditure Carryover Account. The balance recorded in the Capital Expenditure Carryover Account will be deemed as:
 - (i) an under recovery of revenue, if the Approved Capital Expenditure exceeds the Capital Indicator; or
 - (ii) an over recovery of revenue, if the Approved Capital Expenditure is less than the Capital Indicator.
- (c) The balance recorded in the Capital Expenditure Carryover Account will include:
 - (i) a return on capital component, calculated as the difference between the return on capital assumed for the Capital Indicator

and the return on capital that should have applied for the Approved Capital Expenditure, accrued at the WACC;

- (ii) a depreciation component, calculated as the difference between the depreciation assumed for the Capital Indicator and the depreciation that should have applied for the Approved Capital Expenditure; and
- (iii) a tax depreciation component, calculated as the difference between the tax depreciation assumed for the Capital Indicator and the tax depreciation that should have applied for the Approved Capital Expenditure,

and will be calculated using the modelling parameters and assumptions used to determine the Reference Tariffs.

- (d) The balance in the Capital Expenditure Carryover Account at the end of each Year will be rolled forward at the WACC.
- (e) The balance in the Capital Expenditure Carryover Account at the end of the Term will be taken into account when determining Reference Tariffs to apply in the next undertaking with the intention of clearing the Capital Expenditure Carryover Account over the term of that next undertaking. In the event there is no next undertaking, the balance in the Capital Expenditure Carryover Account will be recovered from, or returned to, Access Holders (as the case may be) in the form of a single payment following the Terminating Date.

Attachment 5: New Clause 3.7

3.7 Maintenance of Regulatory Asset Base

Queensland Rail will maintain the Regulatory Asset Base in accordance with **schedule AA**.

Attachment 6: Amended Schedule F Cover

Queensland Rail Limited

[Insert name of Operator]

Access Agreement

[This agreement is a standard access agreement for use with coal carrying Train Services in the West Moreton System or Metropolitan Region with the same characteristics as the relevant Reference Train Service and where the Access Holder is the rolling stock operator for the relevant Train Services.]

Version: 1

Date Approved: [insert date]