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Dr. Malcolm Roberts
Chairman
Queensland Competition Authority
GPO Box 2257
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Dear Dr Roberts Malcolm.

Queensland Rail Submission – Response to QCA's Consultation Paper on the West Moreton Reference Tariff

Queensland Rail welcomes the opportunity to provide a response to the Queensland Competition Authority's (QCA) Consultation Paper on Queensland Rail's West Moreton Coal Tariffs June 2014.

Queensland Rail's submission may be found in the attached. In addition, the document contains Annexure 1 detailing independent advice from PwC in relation to selected matters raised in the Consultation Paper.

There are aspects of the Consultation Paper that Queensland Rail accepts entirely, or with the principle of amendment, and those that it does not. These have been identified in the submission.

Queensland Rail is committed to achieving an outcome that promotes efficient and sustainable investment in rail infrastructure and looks forward to working closely with its stakeholders and the QCA to finalise the AU1 process, including the West Moreton Reference Tariff as early as possible.

If you have any questions please contact Douglas Jasch, Manager Regulation and Policy, on (07) 3072 0544.

Yours sincerely

[redacted]

Helen Gluer
Chief Executive Officer

18 July 2014

Queensland Rail's Submission on the QCA's Consultation Paper on the West Moreton Reference Tariff

18 July 2014

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Executive Summary

Queensland Rail welcomes the opportunity to provide a response to the Queensland Competition Authority's (QCA) Consultation Paper on Queensland Rail's West Moreton Coal Tariffs June 2014. Queensland Rail has been actively engaged in discussions with the QCA and industry on the tariff reset since the organisation's separation from QR Limited in 2010.

Queensland Rail has a number of concerns with the QCA's Consultation Paper in relation to the West Moreton coal tariff reset. The key issues are summarised below. A detailed response to each issue is provided in this submission.

Issue	Queensland Rail position
Opening Asset Value	Reject
Metropolitan Blackout	Reject
Volumes	Accept
Maintenance	Partially Accept
Operating Costs	Partially Accept
Regulated Price Relief	Reject
Metropolitan Pricing	Partially Accept

Queensland Rail considers it vital that the West Moreton coal tariffs promote the public interest in investment and sustainable development, while appropriately balancing the commercial interests of all interested supply chain parties, including Queensland Rail, train operators, coal producers and non-coal users of the network.

The approach taken in the QCA's Consultation Paper:

(a) departs significantly from previous valuation methodologies adopted by the QCA in relation to prior Queensland Rail access undertakings and generally in relation to other regulated services;

(b) in its Option 1 approach, inappropriately (and inconsistently with the approach proposed by the QCA's expert consultant) applies a weighted average asset life to calculate asset depreciation, ignoring data that would apply a more appropriate asset life depreciation methodology reflecting the actual condition a more accurate measure of asset renewal requirements;

(c) adopts an approach to asset life calculations that, without reasonable justification, is inconsistent with past regulatory practice;

(d) unjustifiably splits asset valuations between Rosewood to Macalister and Macalister to Columboola without any consideration of the comparative asset qualities of the two track sections and without proper regard to Queensland Rail's considerable investment

in track sections between Rosewood and Macalister, involving sustained and identifiable capital expenditure in both the pre and post 1995 assessment periods;

(e) contrary to general regulatory practice, including the QCA's own recent practice, fails to allow for financing costs, including interest during construction, and transaction costs (associated with accessing capital funding) in arriving at a Depreciation Optimised Replacement Cost (DORC) value as part of its Option 1 approach;

(f) unreasonably and on the basis of flawed assumptions, adopts a 22% reduction factor for the Metropolitan network based upon a 'theoretical' approach;

(g) arbitrarily and contrary to the QCA's previously stated and unambiguous statements on the issue, attributes, in its Option 2 valuation, a zero (scrap) value to productive pre-1995 assets significantly affecting the asset value for the rail infrastructure used to provide the service;

(h) provides an allowance for maintenance on assumptions which are, in Queensland Rail's opinion, flawed;

(i) fails to take account of Queensland Rail's true train control costs, adversely affecting its ability to achieve adequate cost recovery; and

(j) gives inappropriate weight to an unsubstantiated and untested claim about the ability to pay access charges based on a higher reference tariff and fails to recognise that reference tariffs are not intended to provide price relief in order to address transitory market conditions affecting users of the declared service.

For all the reasons set out above and further articulated in this paper and the PWC Report at Appendix 1, Queensland Rail strongly submits that:

(a) The QCA approach in the Consultation Paper, if adopted by the QCA in its determination of Reference Tariffs for the West Moreton system would:

- fail to satisfy the requirements of section 138(2) of the QCA Act, and in particular, by: failing to:
    - give appropriate weight to Queensland Rail's legitimate business interests**;**
    - fully consider the effect of excluding the pre-1995 assets for pricing purposes;
    - have full regard to the pricing principles in section 168A, particularly the requirement to ensure that prices will generate revenue for the service that is at least enough to meet the efficient costs of providing access to the service including a return on investment that is commensurate with the regulatory and commercial risks involved.

(b) The Consultation Paper, if adopted by the QCA in its determination of Reference Tariffs for the West Moreton system, would fall short of the requirement for appropriate decision making by the QCA; and

(c) The approaches taken to the setting of the Reference Tariffs for the West Moreton system in the Consultation Paper would have a very significant adverse effect on Queensland Rail's ability to continue to invest in the system and to operate it in an economically efficient manner and for those reasons cannot be supported by Queensland Rail.

Introduction

Queensland Rail welcomes the opportunity to provide a response to the QCA in respect of the Consultation Paper on Queensland Rail's West Moreton coal tariffs. Queensland Rail has been actively engaged in discussions with the QCA and industry on the tariff reset since the organisation's separation from QR Limited in 2010.

The purpose of Queensland Rail's June 2013 submission of a West Moreton tariff reset was to seek to promote the long-term competitiveness of the West Moreton system, while maintaining a safe and reliable network through investment and the achievement of reasonable returns.

End-users and Queensland Rail have a common objective, the development of a transparent and repeatable approach that provides a robust methodology suitable for rolling forward into future regulatory periods. To this end, Queensland Rail's reference tariff inputs were based upon endorsed QCA principles, established in previous pricing decisions, including a transparent and repeatable methodology that can be rolled forward into future regulatory periods.

The QCA is proposing to move away from certain key principles contained in its 2009 Draft Decision and 2010 Decision, presenting two possible tariffs that are significantly lower than the current tariff, with departures including:

- Optimisation of assets from the Regulatory Asset Base (RAB) via a new 'theoretical' metropolitan blackout methodology reducing the opening RAB by $12.7m (Option 1 – DORC);
- Treatment of pre-1995 assets as sunk (zero value) reducing the opening RAB by $137.9m (Option 2 - Historical Cost); and
- A separate asset base for coal and freight-specific investment in the metropolitan system.

These new principles were not raised with Queensland Rail prior to the release of the Consultation Paper, therefore restricting Queensland Rail's ability to undertake complex economic analysis. Queensland Rail has serious concerns regarding some of the assumptions underpinning the QCA's approach to asset valuation and cost allocation (with these concerns discussed in detail in Queensland Rail's submission).

Queensland Rail must be able to achieve a return on its investment commensurate with the regulatory and commercial risks involved. Access regulation is based on ensuring infrastructure owners earn a reasonable level of return, recognising the potential for monopoly rents, with enough incentive to make investment in the system.

It is acknowledged that the pricing of coal carrying train services within the West Moreton system present some unique challenges, not least because of the diverse nature of the system and the services that use it. Within this context, Queensland Rail is concerned that the Authority in its Consultation Paper has not exercised sufficient caution in its analysis of the risks and returns associated with the West Moreton system. This will result in Queensland Rail being unable to achieve a reasonable return on its assets, or adequate return to justify required future investment in the network.

Once set, a RAB can only be re-opened under very limited circumstances. Any decision by the QCA will have long standing implications for Queensland Rail, the State and for customers.

Queensland Rail believes that it is the Authority's role to determine an appropriate ceiling price in the first instance, based upon 'pure' and appropriate building blocks, with the approved reference tariff including a reasonable rate of return for Queensland Rail. To approve a price that does not provide an appropriate return will lock Queensland Rail into long term under recovery with reduced incentive to invest.

Queensland Rail does not believe that it is the Authority's role to enforce short-term price relief at the cost of long-term reasonable returns on investment to Queensland Rail. Rather, the focus should be on the implementation of an economically pure and repeatable methodology that is not influenced by external factors which exist at a particular point in time.

It is in the best interest of the public and infrastructure users that there are sufficient incentives for future investment in coal supply infrastructure, especially given that the demand for export coal is constrained by the capacity of existing rail (and port) infrastructure.

The Authority should not underestimate Queensland Rail's willingness to work with supply chain participants once the ceiling price is set, to identify an outcome favourable to all stakeholders, if it is in fact determined that particular supply chain participants are experiencing financial difficulty.

Queensland Rail has consistently demonstrated its ability to work in a constructive and reasonable manner with the supply chain and associated stakeholders since separation from QR Ltd. Reinstatement of the Toowoomba Range in the wake of severe flooding both in 2011 and 2013 saw Queensland Rail and Government fund $34M of an estimated total cost of $40M, leaving the three miners with $6M to fund. This was despite the ability to seek a much greater amount through an increase in the reference tariff.

Queensland Rail does not believe that measures such as valuing pre-1995 assets at zero where Queensland Rail won't receive any return on these assets, or measures that don't allow full recovery of Queensland Rail's capital costs that relate to coal services, is in the long term interest of either Queensland Rail or its customers. Neither is it justified in terms of the matters to which the QCA must have regard under section 138(2) of the QCA Act.

In the following submission Queensland Rail will provide detailed responses to the questions raised in the QCA's Consultation Paper, with the reasoning behind Queensland Rail's views.

Additionally, Annexure 1 contains independent advice from PwC in relation to selected matters raised in the Consultation Paper.

Opening Asset Value

Questions

What is the appropriate asset valuation methodology for the western system? Please provide supporting evidence.

Are B&H's asset valuation and related asset lives appropriate? If not, why not?

What is the appropriate approach for determining the regulatory asset base for western system coal tariffs in the context of the QCA's approval criteria in s. 138(2) of the QCA Act? Stakeholder comments are sought on the QCA's proposed options – the asset allocation approach and the historic cost approach.

Response

Queensland Rail does not agree with the QCA proposed asset valuation methodology for West Moreton.

The Authority has derived two potential tariffs in its Consultation Paper; both tariffs are lower than Queensland Rail's proposal, as well as the current charge.

The key difference between the two QCA tariffs and the proposed Draft Access Undertaking 1 (AU1) tariff is the treatment of pre-1995 assets and post-1995 assets. The difference arises due to varying allocations of asset values to non-coal services. Allocations to non-coal services are not attributed to the reference tariff. Additionally, the QCA has applied longer asset lives than Queensland Rail.

Reference Tariff	$/'000 gtk	Approach to West Moreton Pre/Post 1995 Assets
AU1	22.22	• Under this option, assets that are shared with coal and non-coal services receive the following allocation to coal: o Pre-1995 assets: **61.7%** o Post 1995 assets: **Full recovery of most**[1] 1995 common-network investment on West Moreton system from coal.
QCA Option 1 DORC	17.21	• Under this option, assets that are shared with coal and non-coal services receive the following allocation to coal: o Pre-1995 assets: **56.6%.** o Post-1995 assets: **72.6%.** • Assets that are only traversed by coal services receive a 100% allocation to coal.
QCA Option 2 Historical Cost	13.59	• A **zero** value is placed upon pre-1995 assets. • Coal traffics pay for **100%** of post-1995 assets.

Queensland Rail believes that both Option 1 (DORC) and Option 2 (Historical Cost) are inconsistent with the provisions of the QCA Act and does not support either option in their current form. The following sections will examine key issues relating to these options.

Queensland Rail has engaged PwC as an independent party to review and comment on the methodology applied by the QCA in its Consultation Paper. PwC's findings and recommendations may be found in Appendix A.

Queensland Rail Analysis

Option 1 (DORC)

Depreciation

The QCA has departed from its consultant's treatment of depreciation in its Discussion Paper, opting for a weighted average asset life depreciation profile calculated over entire asset classes, instead of the sum of individual asset life depreciation profile.

Depreciation Impacts (Asset Class Lives) under Option 1

Version	Tariff	Change
QCA	$17.21	
B&H	$17.83	+$0.62

[1] The following proposed post-1995 AU1 projects/programs have a 72.6% allocation to coal rather than 100%: Slope Stabilisation on Toowoomba Range Project; Drain Renewals Project; Level Crossing Compliance Program; Siemens AZ S 600 Axle Counter Replacement Project; ATP Encoder Replacement Project; Radiocommunications Strategy; and the Backbone Strategy.

This measure lowers gross depreciation over the term, flattening the profile over the life of the asset. This method contrasts with Queensland Rail's submission, where the depreciation profile reflects the actual asset lives of the individual assets, stepping down at specific life expiries.

Queensland Rail contends that calculating depreciation by individual asset class lives best reflects the actual deterioration of assets, and is a more accurate measure of asset renewal requirements. Ignoring this available information and thus reducing near-term claimable depreciation is against Queensland Rail's legitimate business interests.

The object of Part 5 of the QCA Act is:

> "*to promote the economically efficient operation of, use of and investment in, significant infrastructure by which services are provided, with the effect of promoting effective competition in upstream and downstream markets"*

This object is better achieved by applying greater accuracy to pricing including the calculation of deprecation, and it should be noted that this information is readily available. The QCA may approve the reference tariff having regard to whether the price of the service will:

> *"generate expected revenue for the service that is at least enough to meet the efficient costs of providing access to the service and include a return on investment commensurate with the regulatory and commercial risks involved*[2]*"*

A more accurate treatment of asset lives, classes and depreciation will facilitate a return on investment commensurate with the regulatory and commercial risks involved.

Asset Lives

While Queensland Rail's AU1 valuation and B&H's proposed valuation roughly equate, Queensland Rail is concerned with the substantive change to assumed lives if they are applied to post-1995 assets and future infrastructure.

As part of the 2001 asset valuation, the QCA made a general assessment of the economic life of the central Queensland coal rail infrastructure, taking account of the forecast output from Queensland coal mines into the future. As a result of this assessment, the QCA concluded that the economic life of rail assets is not a factor that will constrain their operational lives.

Subsequently, as part of its assessment of QR's second undertaking, the QCA considered that, on balance there was sufficient justification for a 50 year economic life cap on Rail Infrastructure assets. Therefore, the QCA considered it appropriate that QR's below-rail assets with remaining lives exceeding 50 years be revised to a remaining life of 50 years[3].

Queensland Rail does not believe that B&H has shown sufficient cause to justify elongated asset lives that is consistent with demonstrable regulatory practice or its commentary on the state and longevity of the assessable asset base.

[2] Queensland Competition Authority Act (Qld) 1997, section 168A.
[3] Queensland Competition Authority, Draft Decision, QR's 2005 Draft Access Undertaking, July 2005, p 63.

Lengthened asset lives instil a disincentive for future investment into the network and are against Queensland Rail's legitimate right to earn a reasonable return on its assets.

Split of DORC Valuation by Distance

B&H have assessed a DORC valuation for the West Moreton system, calculating asset values by class for the entirety of the Rosewood to Columboola track sections.

Similar to its approach in its December 2009 Draft Decision, the Authority has subsequently performed a percentage split of its consultant's valuation between Rosewood to Macalister and Macalister to Columboola. No consideration has been given to the comparative asset quality of the sections.

Queensland Rail acknowledges that it did not address the problem of the QCA allocating by distance in its June 2013 West Moreton reference tariff reset submission, instead opting to roll-forward values previously assessed by the QCA. With the new valuation and allocation, Queensland Rail believes that the equated valuations are not consistent with the actual state of the track, or its record on investment.

Queensland Rail has made considerable investment into track sections between Rosewood and Macalister, with sustained and identifiable capital expenditure in both the pre and post 1995 assessment periods. With a relatively new single end-user, and a low proportionality of coal railings, Queensland Rail has not been required to invest a comparable amount on the line between Macalister and Columboola. Queensland Rail thus contends that the equated DORC valuation per kilometre for Rosewood to Macalister must be comparatively higher than for Macalister to Columboola.

Since QR Network's original assessment in August 2007, and subsequent review by the QCA's previous consultant, Everything Infrastructure, Queensland Rail has sustained its significant capital program with the majority of spending between Rosewood and Macalister. Even by resetting the valuation datum date to 1 July 2013 and reapplying an allocation by distance, a significant portion of this new program would misallocate the actual spend. The end result would be an undervaluation of Rosewood to Macalister and an overvaluation of Macalister to Columboola, despite almost six years passing of accrued and no new capital expenditure.

In lieu of separate valuations, Queensland Rail proposes that the written down value of post-1995 capital expenditure (at assessed regulatory lives) to the Rosewood to Macalister and Macalister to Columboola sections separately prior to allocating what remains of B&H's DORC valuation by distance.

This correction is based upon the same reasoning as the correction applied by the QCA when it revised the allocation of tunnels to take into account that they are all located in the Rosewood to Macalister section.

To not allow the correction would be against Queensland Rail's legitimate business interests as it will result in less revenue for Queensland Rail and therefore a lower than efficient rate of return.

Financing Costs

Queensland Rail believes that financing costs, including interest during construction, and transaction costs (associated with accessing capital funding), have not been included in B&H's final DORC value. The inclusion of both costs is standard regulatory practice, and has been accepted by the QCA in past instances, including the 2005 Dalrymple Bay Coal Terminal Draft Access Undertaking. Queensland Rail is seeking that financing costs and transaction costs be added to the DORC.

Metropolitan Blackout Period

The rationale for reducing the value of pre-1995 assets by 22% to account for the metropolitan blackout period introduces asset stranding risk. This approach is effectively the same as the QCA taking the view that Queensland Rail was imprudent in its design of the pre-1995 assets, and has designed and constructed a network with 22 per cent excess capacity. There has been no suggestion that the pre-1995 network was "over-built". For more discussion, please refer to the "Metropolitan Blackout" section of this document.

Option 2 (Historical Cost)

The proposal to treat pre-1995 assets as 'sunk' and assign a scrap value is inconsistent with regulatory precedent. The QCA has previously stated that exclusion of assets on the ground that they are sunk fails to provide incentives for the better management of assets or for future investment.

Further, the Authority has stated that automatically valuing past assets at zero is not consistent with efficient outcomes that would prevail in a competitive market. It is also worth noting that the write down was not due to condition or age of the assets.

The decision also appears arbitrary. The QCA has suggested 1995 is when significant traffics on the West Moreton system commenced, however as noted by B&H in its review, coal has been a regular traffic on the network since 1982. It instead would seem that 1995 has been chosen to align with the corporatisation of Queensland Rail, which is irrelevant for establishing a regulatory asset base. The primary issue to be determined is the present day replacement cost of a network configuration that provides the same level of service of the current network – this is most accurately done using a DORC approach.

The QCA has further advised Queensland Rail that a small error in a formula caused the value of QCA Option Two (Historical Cost) to be slightly understated. Queensland Rail understands that the QCA has revised this option upward from $13.59/'000 gtk to $13.75/'000 gtk.

WACC

Queensland Rail's proposed WACC in its 2013 tariff reset submission was made prior to the QCA WACC review later that year. Queensland Rail understands that the assessment of its WACC will be influenced by the outcomes of the review.

Access Facilitation Deeds

Queensland Rail's position on Access Facilitation Deeds (AFDs) is consistent with PwC's findings and recommendations outlined in Appendix 1.

Customer funded assets (through AFDs) must be preserved at 100% of their value. Queensland Rail is legally bound to provide an associated rebate. AFD arrangements are intended to transfer commercial and regulator risk to another party throughout the term of the agreement.

Section 6.5.2(f) of the current QR Network (2008) June 2010 Access Undertaking requires Queensland Rail to provide a rebate to a customer where there is an upfront contribution or Access Facilitation Charge (AFC) presented to fund capital expenditure. These rebates are funded through depreciation on the asset and the nominal return.

By broadly reducing the asset base, there is an equivalent percentage decrease in the available return and depreciation of AFD funded works. This limits the ability for Queensland Rail to recoup intermediate returns it is entitled to before it is redirected through rebates.

The QCA Act

Queensland Rail believes that both options contained in the QCA's consultation paper are contrary to the provisions of the QCA Act.

Option 1 (DORC) uses an average weighted remaining asset life across all asset classes as a basis for determining depreciation. Information relating to individual asset classes is available and was used by Queensland Rail in its modelling and should be applied. Also, the Authority has not differentiated the DORC value between sections Rosewood to Macalester and Macalester to Columboola. The first section should have a higher value than the second based on capital expenditure on the two sections.

Queensland Rail's legitimate financing costs have been excluded from the DORC and the Authority proposes to introduce an unacceptable level of stranding risk by reducing the value of pre-1995 assets by 22% to account for the metropolitan blackout period. Further, the Consultation Paper proposes that Queensland Rail not be able to recover 100% of its expenditure relating to AFDs.

The QCA's Option 2 (Historical Cost) proposes to not allow Queensland Rail to receive any return on any of its pre-1995 assets at all, based only upon what appears to be an arbitrary date. This is overwhelmingly in contrast to regulatory precedent.

The above principles contained in the QCA's Consultation Paper reduce Queensland Rail's legitimate return on the efficient operation of, and use of and investment in, its infrastructure. They are contrary to the object in Part 5 of the QCA Act as well as the requirements of section 168A(a).
The object of Part 5 of the QCA Act is:

> "*to promote the economically efficient operation of, use of and investment in, significant infrastructure by which services are provided, with the effect of promoting effective competition in upstream and downstream markets*"

While the pricing principles in section 168A(a) require that Queensland Rail's price should:

> *"generate expected revenue for the service that is at least enough to meet the efficient costs of providing access to the service and include a return on investment commensurate with the regulatory and commercial risks involved*[4]*"*

Both QCA options are against Queensland Rail's legitimate business interests which is a matter that the QCA should properly have regard to as required by section 138(2) of the QCA Act. Queensland Rail also refers to section 138(2)(f) which requires the Authority to only approve a draft access undertaking after having regard to the effect of excluding existing assets for pricing purposes. The exclusion of the pre-1995 assets in Option 2 has a profound effect on the setting of the reference tariff and consequently, on Queensland Rail's ability to achieve an adequate return on its investment in that part of the West Moreton system. It also adversely impacts on Queensland Rail's ability to justify further investment in that part of the system.

On this basis Queensland Rail rejects the two options as they currently stand.

[4] Queensland Competition Authority Act (Qld) 1997, section 168A.

Metropolitan Blackout

Question

Do you agree with the QCA's estimate that the effect of the metropolitan blackout is a reduction of 22% of possible western system train paths? If not, please provide supporting evidence with reference to the analysis in Appendix 3 of B&H's report

Response

Queensland Rail does not support a metropolitan blackout reduction being applied to West Moreton train paths.

Asset Stranding Risk

Queensland Rail included a blackout reduction of 15% in its tariff reset submission based on the endorsed QCA principles established in previous pricing decisions.

The QCA is proposing to move away from these key principles, including a recast of its methodology for calculating a metropolitan blackout reduction (discussed in detail below).

Queensland Rail engaged PwC to objectively review the reasonableness of the QCA's new methodology. In summary, PwC do not believe that the reduction factor is appropriate given the interfaces of the system, asset stranding risk implications, and assumptions on latent capacity. PwC's findings and recommendations may be found in Appendix 1. Queensland Rail agrees with the PwC findings.

Revised Approach - Theoretical v Operational

B&H advised Queensland Rail that its proposed 22% reduction factor is based upon a 'theoretical' approach[5] rather than the previously established 'operational' approach applied in the QCA's 2009 and 2010 draft decisions.

This derivation involves saturating the system to calculate the number of available paths that are theoretically possible. Operational constraints which impact the total number of train paths (including above rail and port inefficiencies that are beyond Queensland Rail's direct control), are ignored in this type of assessment, with B&H stating that:

> *"Our view is that for the purposes of planning, one should not assume the performance of the system and that if there is performance pr oblems, then those problems should be addressed in other ways such as improving the engineering reliability or human behaviour. In any case the performance shortfalls in practice can be accounted for in contractual arrangements."* [6]

[5] Meeting 26 June 2014 with B&H & QCA to explain the methodology behind the metropolitan 'blackout'.
[6] "*Appendix 3 – The Brisbane Peak "Black-out" Period – Impact on Western System Coal Services*" in "*B&H Review of the Queensland Rail (QR) West Moreton System Maintenance Costs Capital Costs (Capex) Operations Costs Depreciated Optimised Replacement Cost (DORC) for the Queensland Competition Authority May 2014*, p. 129.

B&H Calculation

In summary, B&H adopted the following theoretical methodology:

Assumptions

- 48 paths available per day or 326 one-way paths over a 7 day (week) period.
  - Based on 30 minute one-way paths for coal carrying services going from the West Moreton system to Fisherman Islands.
- 38 one-way paths forgone due to maintenance impacts on the West Moreton system, not being available for coal train services.
  - Based on 19 hours of maintenance per week.
- 16 one-way paths forgone due to metropolitan maintenance closures
  - Based on eight hours a week.
- 40 one-way paths locked-out for coal-trains due to Metropolitan Blackout over peak passenger times.
  - Based on four loaded paths and four unloaded paths per weekday.

	Measure	**One-Way Paths**		
Total Theoretical Capacity		326		
Reductions (West Moreton)	Maintenance	38		
Sub-Total		288		
Reduction Metro	Maintenance	16		
	Blackout	40	*19%*	*(56/288)*
Sub-Total		232		

Additional inefficiency factor

B&H have also introduced a further reduction due to a perceived under estimate of capacity through inefficient planning stating:

> *"It is also relevant that for various reasons, QR is not planning to the full extent of the potential of the system, even with our rounding to 30 minutes for the longest sectional running time. The effect of QR's planning approach is to under-estimate the potential by 36 [total loaded and unloaded] paths in 288.*
>
> *Whether paths are reduced by suburban maintenance or some other factor, it is QR′ decision to approach the planning in this way and the actual interference to pathways must have an effect on capacity."*[7]

[7] B&H Review of the Queensland Rail (QR) West Moreton System Maintenance Costs, Capital Costs (Capex), Operations Costs, Depreciated Optimised Replacement Cost (DORC) for the Queensland Competition Authority May 2014, Appendix 3, p. 134.

B&H have applied an additional efficiency reduction factor of 12.5% (i.e. 36/288) to the 19.4% resulting in a metropolitan blackout period of 21.87% (1.125 x 19.4%), or rounded up, a reduction factor of 22%. B&H advised that this reduction was largely due to a perceived mismatch between maintenance on the metropolitan system and the West Moreton system, as well as perceived scheduling preferences for passenger services over coal[8].

Queensland Rail Analysis

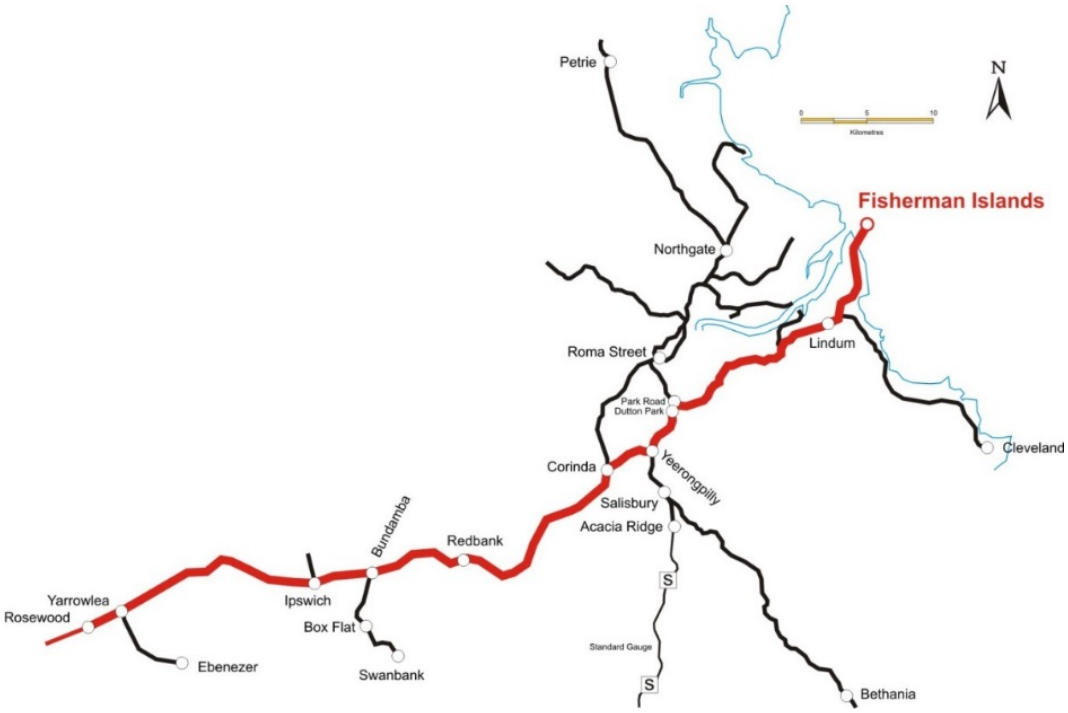
Total Paths

Using 30 minutes for a one-way path, Queensland Rail calculates **336** paths, as opposed to B&H's 326 total paths available per week.

Using 19 hours maintenance in the West Moreton system, there is a reduction of 38 one-way paths. Therefore, there are **298** one-way paths per week available prior to metropolitan system considerations.

	Measure	**One-Way Paths**
Total Theoretical Capacity		336
Reductions (West Moreton)	Maintenance	38
Sub-Total		298

Metropolitan Impacts



[8] Meeting 26 June 2014 with B&H & QCA to explain the methodology behind the metropolitan 'blackout'.

Corinda and Lytton Junction – Loaded Trains

B&H calculated that **40** paths (20 loaded and 20 unloaded) per week are lost due to the metropolitan blackout.

Using the Translink timetable, B&H assumed gaps of six minutes at Corinda where a loaded train can reliably travel from the down main Ipswich line across all lines to Moolabin to continue to Fisherman Islands. This resulted in a loss of two loaded paths (or 22 hours) per weekday where a loaded path could operate through the Corinda Junction.

Queensland Rail accepts B&H's use of six minute gaps and the assumed loss of two loaded paths.

B&H repeated this exercise for the Yeerongpilly to Lytton Junction section of the metropolitan region. Again two paths were observed by B&H as lost, however one of those paths is the same as the existing loss in the Corinda exercise. This must therefore result in a reduction of only one further path.

Queensland Rail estimates that in total there are three loaded paths that are not able to operate or that have interference with various interfaces. This is equivalent of 15 loaded paths per week (down from 20).

Corinda and Lytton Junction – Unloaded Trains

A similar exercise was undertaken by B&H in relation to empty train services. B&H identified that three empty trains meet with interference at Lytton Junction to Yeerongpilly section.

In calculating this reduction, B&H advised[9] that its analysis of the empty paths between Lytton Junction and Yeerongpilly was based on all empty paths operating on the suburban narrow gauge network and not on the dual gauge network. This assumption is incorrect.

Queensland Rail acknowledges that during peak period the ability of loaded trains to get through Corinda is restricted. Queensland Rail therefore schedules the first empty path (after both the morning and afternoon peak) on the parallel dual gauge when the suburban track is unavailable. With this alternate track, no reduction factor should be applied in this case.

B&H additionally consider that the interference on some of the empty paths are not the same as some of the loaded paths and that this results in a loss of an additional loaded path on its return giving the net result of eight paths per weekday impacted by the Metropolitan Blackout.

It is incorrect that an empty path cannot be lined up with a potential loaded path. There are different transit times for different destinations that the empty path may be going to. For example, an empty path may return from Jondaryan coal siding to Corinda in approximately 15 hours compared to an empty train returning from Cameby Downs in approximately 22 hours.

Therefore, by scheduling trains a certain way, an additional loaded path is retained.

[9] Meeting 26 June 2014 with B&H & QCA to explain the methodology behind the metropolitan 'blackout'.

Queensland Rail estimates that in total there are three unloaded paths that are not able to operate or that have interference with various interfaces. This is equivalent of 15 unloaded paths per week (down from 20).

Summary

Queensland Rail calculates the impact of the Metropolitan Blackout as six paths per weekday, or 30 paths per week.

	Measure	**One-Way Paths**	**B&H**
Total Theoretical Capacity		336	326
Reductions (West Moreton)	Maintenance	38	38
Total		298	288
Reduction			
	Metro Blackout - Loaded	**15**	**20**
	Metro Blackout - Unloaded	**15**	**20**
Sub-Total		**30**	**40**

Maintenance

B&H calculate that approximately 60% of the maintenance programs are overlapped between the West Moreton and metropolitan systems. B&H also assume that the type of work performed in the West Moreton system is over a 48 hour shutdown, but limited to daylight works only, compared to the non-stop maintenance tasks on a weekend metropolitan closure.

Both of these assumptions are incorrect.

With regards to the monthly maintenance programs, Queensland Rail's Supply Chain South and Network SEQ groups strategically plan years in advance to ensure that any closures are complementary. This year (and future years) there are no weekend closures in the affected suburban network that don't have corresponding maintenance work performed in the West Moreton System[10]. Further, if suburban maintenance is planned outside of weekends, it is performed in such a way as to leave a track open to continue to run West Moreton services (potentially under speed restriction or on an Alternate Proceed Authority which would result in some delays but no cancellations).

While work is generally performed during daylight hours in the West Moreton system, the track is usually left unfit for travel overnight. This allows a higher productivity and efficiency, due to the requirement to only reinstate the track once. As such, there are no train paths which need to be accounted for in the metro blackout reduction.

Therefore, the impact of suburban system maintenance above what has already been covered in the West Moreton maintenance is based upon 12 hours of the 48 hour shutdown being only required for the suburban maintenance. As the 48 hour shutdowns only occur every fourth week (on average), this equates to an average of three hours per week which translates to six one-way paths per week.

[10] This is demonstrated by the *Western Corridor Alignment Calendars* for 2014 and 2015, a copy of which has been provided to the QCA separate to this submission.

	Measure	One-Way Paths	B&H
Total Theoretical Capacity		336	326
Reductions (West Moreton)	Maintenance	38	38
Total		298	288
Reductions			
	Metro Blackout - Loaded	15	20
	Metro Blackout - Unloaded	15	20
Sub-Total		30	40
	Maintenance	**6**	**16**
Total Reductions		36	56

The Inefficiency Factor

As stated earlier, the QCA has applied a further reduction of 12.5% to the 19.4% impact on available train paths, resulting in a rounded up reduction factor of 22%. The additional 12.5% is due to B&H perceived inefficiencies in Queensland Rail 'operations' and, in particular, a perceived mismatch between metropolitan maintenance closures and western system maintenance closures.

However, practically there is no under estimate of capacity. If B&H are to employ theoretical approach of a saturated system, ignoring allowances for operational inefficiencies there is a resultant double-count of reductions.

As stated, maintenance programs are aligned, and operational rules/guidelines must be a consideration[11].

[11] "*Appendix 3 – The Brisbane Peak "Black-out" Period – Impact on Western System Coal Services*" in "*B&H Review of the Queensland Rail (QR) West Moreton System Maintenance Costs Capital Costs (Capex) Operations Costs Depreciated Optimised Replacement Cost (DORC) for the Queensland Competition Authority May 2014*, p. 129.

Recalculation

Taking into account the Queensland Rail analysis, the resultant reduction is as follows:

	Measure	One-Way Paths	B&H	
Total Theoretical Capacity		336	326	
Reductions (West Moreton)	Maintenance	38	38	
Total		298	288	
Reductions				
	Metro Blackout - Loaded	15	20	
	Metro Blackout - Unloaded	15	20	
		30	40	
	Maintenance	6	**16**	
Total Reductions		36	56	
Unavailable paths %		12.1%	19.4%	
Inefficiency Factor		0%	2.4%	(12.5% of 19.4%)
Total unavailable paths %		12.1%	22%	(rounded up)

Queensland Rail calculates the metropolitan blackout to be 30 one-way paths due to the 'peak period' plus an additional six paths due to the ongoing metropolitan maintenance task.

Applying the QCA's methodology, the resultant loss in capacity due to the metropolitan peak period and maintenance is 12.1% (i.e. reduced by (30 + 6) / 298 =12.1%) rather than the QCA's assumed 22%.

Summary – Metropolitan Blackout

Queensland Rail does not support the QCA's use of a metropolitan region blackout reduction factor as supported by the PwC paper.

However, if the QCA does apply a metropolitan blackout reduction to possible West Moreton train paths, a figure of no greater than 12.1% should apply.

Volumes

Question

Do you agree with the QCA's proposed approach to use contracted train paths in determining the volume estimate? If not, why not, and please provide supporting evidence.

Response

Queensland Rail is pleased that the QCA has accepted Queensland Rail's proposed volumes in its Consultation Paper. Queensland Rail agrees that as per the QCA's 2009 Draft Decision, using contracted throughput is a verifiable measure, reflecting clear evidence of customer demand.

New Hope has claimed in their submission that West Moreton coal volumes had exceeded forecasts, particularly over the past two years proving a revenue 'windfall' for Queensland Rail. As stated in the Consultation Paper, in reality, actual West Moreton volumes fell short of those contracted during the tariff observance period of 2009-2013[12]. So too did non-coal traffics, representing some of the downside risks Queensland Rail absorbs under a price-cap form of regulation.

In any event, the substitution of a coal for a non-coal path does not result in a 'windfall' for Queensland Rail, as per the Pricing Model, all traffics are assessed as paying the same price, in this case the higher coal access charge.

While Queensland Rail accepts the use of contracted train paths to determine the volume estimate for the reference tariff, it reserves the right to resubmit volumes for the AU1 period based upon any changes to system contracted paths prior to the Authority's Final Decision.

Summary – Volumes

Queensland Rail accepts the QCA's approach of using contracted train paths to determine the volume estimate. However, Queensland Rail reserves the right to resubmit volumes for the AU1 period prior to the Authority's Final Decision.

[12] Refer QCA Consultation Paper: Queensland Rail's Western System Coal Tariffs June 2014, p.8.

Maintenance

Question

Is the QCA's proposed approach to maintenance costs for the western system appropriate? Stakeholders are requested to have regard to the B&H report.

Response

Queensland Rail partially accepts the Authority's proposed maintenance costs.

Efficient Maintenance Costs

QCA consultant B&H found that Queensland Rail's proposed maintenance costs for the West Moreton system are efficient, except for Queensland Rail's allocation for mechanised resleepering.

One of the primary ways that Queensland Rail can contribute towards the development and ongoing enhancement of an efficient coal supply chain is via an efficient and effective maintenance program, delivering an appropriate level of service quality to users.

Queensland Rail has submitted a maintenance program totalling $104.5 million for the AU1 period.

The QCA sought the advice of B&H consultancy to review the appropriateness of the AU1 maintenance allowance. While B&H accepted all other costs included in the proposed allocation, mechanised resleepering costs were deemed high by industry standards.

Due to the conditions and isolation of the relevant sections of the track, Queensland Rail had proposed that the ongoing replacement cost of an individual sleeper equated to $346. B&H considered that comparative industry measures equated to approximately $200 per sleeper, thus a capital component may be inadvertently included in the allowance[13].

The QCA's Consultation Paper proposes to apply a downward adjustment to Queensland Rail's AU1 mechanised resleepering allowance, reducing it by $10M (i.e. from $24M to $14M).

Mechanised Resleepering

Queensland Rail's maintenance regime needs to achieve an appropriate balance between service quality and cost. Queensland Rail believes it delivers a competitive maintenance product, ensuring standards within its asset performance indicator bandwidths are met on a consistent and timely basis. However, where it is able to drive further efficiencies, it is incentivised to do so.

[13] B&H Review of the Queensland Rail (QR) West Moreton System Maintenance Costs, Capital Costs (Capex), Operations Costs, Depreciated Optimised Replacement Cost (DORC) for the Queensland Competition Authority May 2014p.10,26-28.

Queensland Rail has recently undertaken a detailed review of the costs associated with the mechanised resleepering activity for the West Moreton coal system.

The review looked at the interaction between maintenance on the West Moreton system and the non-coal systems around it. Where demand from rail traffics is low, there will be a higher degree of tolerance for scheduling of track closures, without affecting annual throughput. Where the demand from rail traffics is high and the system is constrained (such as the West Moreton system) there will be less flexibility in relation to when track closures may be taken. Another significant cost saving is the improved sharing of the mobilisation and de-mobilisation costs across coal and non-coal assets

Queensland Rail has identified that cost efficiencies may be obtained through better coordination of mechanised resleepering works between the West Moreton system and nearby non-coal lines (e.g. the Southern line to Warwick and Glenmorgan line).

This significant change in resource management will further ensure the continuity of the maintenance task throughout the year, with a higher, and more utilisation rate of staff and resources.

Queensland Rail has therefore revised the estimated mechanised sleeper cost as per the below table:

Revised Sleeper Cost[14]

Component	Cost
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

This reduction in the sleeper cost results in a decrease in AU1's proposed mechanised resleepering program from $24M to $19.9M. In providing the above breakdown of components and costs the Authority should be better able to assess Queensland Rail's mechanised resleepering claim. Queensland Rail considers that [redacted] per sleeper is an efficient cost and seeks that the QCA increase the maintenance allowance to reflect this.

Capital Expenditure versus Maintenance

As described by the Authority's consultant, there is a fundamental trade-off between maintenance and capital expenditure. Maintenance can be used to maximise/ extend the life of an asset, deferring the need for upgrades or replacement. Alternatively, there may be

[14] These costs do not include cutting widening, embankment widening, drainage improvements or access road improvements. Included are Project Management (i.e. Program, track possession planning, work quality documentation, etc.) [redacted]

circumstances where capital expenditure (for example, investing in a particular type or quality of asset) could reduce the need for maintenance through time and hence reduce these costs.

Queensland Rail believes that it strikes the appropriate balance between its capital expenditure program and the significant maintenance task required subject to the system conditions. Queensland Rail routinely considers the option of capital upgrades in lieu of maintenance, however this is usually constrained by the user's ability to pay, and network downtime that may be incurred for some of the more considerable projects. Planning decisions are based on a whole-of-life analysis to ensure the long-term integrity and safety of the network.

Summary – Maintenance

Queensland Rail has identified further synergies to deliver a lower average variable cost for its mechanised resleepering activities. Queensland Rail will support a reduction in the sleeper unit price to [redacted] (from $346) per sleeper. This results in a total reduction of $4.1M.

Operating Costs

Question

Is the QCA's proposed approach to operating costs for the western system appropriate? Stakeholders are particularly invited to comment on the QCA's proposed estimate of train control costs.

Response

Queensland Rail partially accepts the Authority's proposed approach to operating costs for the West Moreton system.

Efficient Operating Costs

QCA consultant B&H found that Queensland Rail's proposed operating costs for the West Moreton system are efficient, except for Queensland Rail's allocation for train control costs.

Queensland Rail's 2011/12 Below-Rail Financial Statements (BRFS) formed the basis for the calculation of the West Moreton operating costs for AU1, with a coal-specific allowance being developed separately for both the Rosewood to Macalister and Macalister to Columboola sections.

Regional train control costs are allocated based on a matrix of the number of control boards required for the safe and efficient operation of services, as well as the relative GTKs over the line sections. Any analysis of the actual cost must take into account the quantum of task at hand, as well as the intricacies of the system, and its various interfaces.

The combination of the asset standard and the operating characteristics of the system create a more labour intensive approach to control relative to other jurisdictions. Queensland Rail continues to attempt to reduce risks through its comprehensive maintenance program.

In recognition of the organisation's reform journey, a further universal productivity dividend was applied to 2011/12 costs as an efficiency glide-path over the course of the AU1 timeframe. 80% of BRFS costs were applied to the first year of AU1 (2013/14), reducing to 70% by the final year.

The QCA sought the advice of B&H consultancy to review the appropriateness of AU1 operating costs. B&H found Queensland Rail's proposal, based upon the 2011/12 BRFS and with the glide-path applied, to be within a 'reasonable range', with the exception of train control which B&H considered to be outside of similar network benchmarks[15].

[15] B&H Review of the Queensland Rail (QR) West Moreton System Maintenance Costs, Capital Costs (Capex), Operations Costs, Depreciated Optimised Replacement Cost (DORC) for the Queensland Competition Authority May 2014, p. ix.

B&H also reviewed the 2012/13 BRFS which were released post Queensland Rail's tariff submission. Again these vindicated Queensland Rail's cost base to be within a 'reasonable range', with the exception of train control costs.

B&H noted that the West Moreton operating costs had decreased by 30% over the 12 month period between financial statements, including a 10% decrease in train control costs. While lauding the glide-path proposal, B&H commented:

> *With a 70% target for 2016/2017, Train Control costs will be approximately $2.1m and be more comparable with the benchmarks provided in Table 8 and our suggested budget.*
>
> *…The fact that QR has readily identified the inefficiency of its operations and is making steps to rectify the inefficiencies will be applauded by the industry."*[16]

B&H have thus proposed an allowance of $2.1M per annum for train control, compared to the $3.1M in the 2011/12 BRFS, and $2.8M per annum provided in the Queensland Rail 2012/13 BRFS.

The QCA Consultation Paper proposes to base the West Moreton operating cost allowance on the operating costs contained in the 2012/13 BRFS, but with a downward adjustment for train control costs resulting in an allocation of $2M per annum for this element.

Glide-Path

Queensland Rail accepts that with new information now available, the 2012/13 BRFS are an appropriate basis for the operating cost allowance. This however must also include an adequate recovery for train control costs.

As evidenced by the 2012/13 BRFS, Queensland Rail's continuing strong reform program has delivered significant efficiency gains to the business and its customers.

While costs may include further efficiency dividends along the organisation's reform journey, the pace of this reform should not be at the expense of the safe delivery of the service now.

It is in both the public interest and Queensland Rail's legitimate business interests that Queensland Rail be permitted the opportunity to continue its successful reform process, while ensuring adequate recovery, allowing Queensland Rail's pricing and business strategies to adjust. With other operating costs being efficient, the glide-path should only be applied to the current train control costs. Indeed, regulatory precedent supports this.

Queensland Rail refers to the ACCC's 2004 review into mobile phone access charges[17]. While this precedent is focused on the price of the service versus the underlying cost parameters, the implied effect is equivalent to the Queensland Rail proposal.

[16] B&H Review of the Queensland Rail (QR) West Moreton System Maintenance Costs, Capital Costs (Capex), Operations Costs, Depreciated Optimised Replacement Cost (DORC) for the Queensland Competition Authority May 2014, p 53.
[17] http://www.accc.gov.au/system/files/Final%20report%20-%20mobile%20terminating%20access%20service%20%28June%202004%29.pdf p 216.

While prices reflecting the efficient cost of a service promote economic efficiency, a sudden decrease from actual costs can impose 'substantial' adjustment costs on the regulated business. The regulator would impinge on legitimate business interests of the regulated business by reducing actual costs without providing an entity such as Queensland Rail the opportunity to reduce these costs.

On balance, the ACCC believes it is best that the regulated business specify an adjustment rate towards efficient prices that gradually reduces its current price to that which is determined to be efficient, something that Queensland Rail has done. As discussed earlier, B&H have confirmed Queensland Rail's target for 2016/17 train control costs is efficient.

As such, Queensland Rail proposes to apply a glide-path only to train control costs taking the train control costs in the final year to the equivalent of $2.1m in 2017/18 dollars.

Summary – Operating Costs

Queensland Rail does not support the QCA's significant reduction in train control costs at the expense of adequate cost recovery. Queensland Rail otherwise supports the proposed rebase of costs to the 2012/13 BRFS with an efficiency dividend applied only to train control costs over the AU1 period.

Price Relief

Question

Is there a way to address stakeholder concerns about high tariff levels while recognising the interests of Queensland Rail in receiving adequate revenue?

Response

Queensland Rail strongly disagrees with the QCA's preference for regulating short-term price relief that impacts on long-term investments and returns. This practice is inconsistent with previous pricing decisions, the QCA Act and other jurisdictions.

Queensland Rail believes that the QCA's role in its assessment of AU1 is to determine a ceiling price based upon appropriate and pure building blocks, with the approved reference tariff being a reasonable return for Queensland Rail that is not influenced by external factors which exist at a particular point in time. Queensland Rail must be able to achieve a return on its investment commensurate with the regulatory and commercial risks involved.

Section 168A of the QCA Act requires that the approved price of access to a service should:

> *"generate expected revenue for the service that is at least enough to meet the efficient costs of providing access to the service and include a return on investment commensurate with the regulatory and commercial risks involved.*

To not allow Queensland Rail an adequate rate of return on its investments, or enough to recover at least its efficient cost, is contrary to:

- section 168A of the QCA Act;
- Queensland Rail's legitimate business interests; and
- the public interest[18].

Once a reference tariff is established, negotiation can take place if it is determined that customers are experiencing financial difficulties. However, ability to pay should be evidence based to ensure efficient outcomes. Both Queensland Rail, with significant stranding risk, and mines are incentivised to seek out mutually beneficial arrangements. However, any arrangement, if considered, should occur after the approval of the reference tariff.

Premature Mine Closures

Substantial attention has been given to closure of the Wilkie Creek mine and what affect access prices have on end-users, notwithstanding the mine is in the process of being bought by another miner.

[18] Queensland Competition Authority Act (Qld) 1997, section 138(2)(b) & d).

While Queensland Rail acknowledges that challenging market conditions and cost pressures have resulted in the closure, it must be considered that access prices are not the only contributor. Indeed, operational costs encompass a broad spectrum of inputs that are factored into the cause including above rail haulage agreements and exchange rate risk.

Even within this environment, despite the difficulties that the Wilkie Creek mine has faced, there remains strong demand for unused train paths at the current access price and within existing access conditions.

Outside of cost pressures, there are also a range of reasons why mines may prematurely close, including:

- geological conditions and safety concerns;
- mining lease approvals and associated conditions;
- mines becoming uneconomic in isolation; and
- mines remaining profitable but becoming uneconomic in the context of a mining company's portfolio of mines.

It is also possible that mines may be closed before the scheduled depletion of the resource due to the combination of adverse mining conditions and market movements.

It must be remembered that the continued profitability of mining depends very much on coal prices and exchange rates that are outside the control of Queensland Rail, or the Authority.

Asset Stranding

Queensland Rail must be able to earn an appropriate rate of return for the risk involved in new investment, and can also effectively mitigate asset stranding risk.

A limited end-user base places this risk firmly with Queensland Rail. Measures to mitigate stranding risk therefore must be considered including network-based pricing outcomes

Benchmarking

The Authority introduces comparative considerations in relation to whether or not the West Moreton reference tariffs are high. However, there is no existing requirement in Queensland Rail's DAU to consider comparison considerations between other coal systems as part of pricing decisions. Adjusting tariffs on the basis of benchmarking against other systems risks contradicting the pricing principles by forcing comparability where there are valid costs and /or risk differences.

Queensland Rail continues to ensure that it learns from best practice peers to deliver efficient services as demonstrated by the organisation's reform program. However, this must be taken in context of the nature of the service, what operational improvements continue to be made, and the quality of the product that is currently being delivered.

Repeatable Methodology

Given that all parties are seeking to implement an economically sound and repeatable methodology, Queensland Rail believes that the QCA should be focussed on providing guidance on a reasonable maximum allowable revenue for the long term that rewards previous coal-related expenditure and incentivises for future expansions.

This must be performed through the existing building blocks methodology that recognises efficient costs and prior investment. Denying adequate recovery of pre and post investment undermines the purpose of the cost exercise and the integrity of the pricing process.

Direct Negotiations

Queensland Rail has consistently demonstrated its ability to work in a constructive and reasonable manner with the coal industry and associated stakeholders since separation from QR Ltd. Reinstatement of the Toowoomba Range in the wake of severe flooding both in 2011 and 2013 saw Queensland Rail and Government fund $34M of an estimated total cost of $40M, leaving the three miners with $6M to fund. This was despite the ability to seek a much greater amount through an increase in the reference tariff.

As a compromise, Queensland Rail may elect to negotiate directly with end users for price relief as a temporary subset of the ceiling price in cases of genuine hardship.

Summary – Price Relief

Queensland Rail does not support the QCA's proposal to offer direct price relief from a regulatory perspective. Queensland Rail may elect to negotiate directly with the end users to deliver temporary price outcomes that do not come at the expense of long-term recovery of sunk investment.

Metropolitan System Pricing

Questions

Is extending the western system tariff across the metropolitan system reasonable?

Is it reasonable to have a separate asset base for coal and freight-specific investment in the metropolitan system? Please explain and justify any alternative approaches.

Response

Queensland Rail partially accepts the Authority's proposed approach to Metropolitan System Pricing.

Metropolitan Asset Base

In AU1 the derived West Moreton tariff is applied to the metropolitan system to ensure an appropriate contribution is being made to the cost and assets of the Brisbane metropolitan system, while avoiding skewed pricing outcomes as a result of high metropolitan system asset values. Queensland Rail's approach is consistent with the QCA's 2009 Draft Decision and 2010 Final Decision.

The Authority has gone further than the approach in its previous decisions, by effectively creating a 'de facto' RAB, indexed to CPI and to which future coal-related metropolitan capital expenditure would be added. Previously, the QCA had approved the extension of the West Moreton tariff to the metropolitan region but without formalising a RAB. This was in recognition of the difficulty of developing a full RAB for the metropolitan system. The QCA has also made other minor amendments to its previous methodology.

Queensland Rail remains resolute that pricing of the metropolitan system to be a complex task, and will require some time to finalise. This should be the prerogative of the asset owner in cases where the recovery of assets is not being efficiently incurred.

Summary – Metropolitan System Pricing

Queensland Rail's initial view is that the Authority's approach of extending the western system tariff across the metropolitan system is reasonable. However, Queensland Rail reserves the right to further consider this matter.

Conclusion

For the reasons set out in this Submission Queensland Rail cannot support a majority of the proposals set out in the Consultation Paper and strongly rejects a Reference Tariff set using either of the Options proposed by the QCA in its Consultation Paper.

Appendix 1 – PwC Report

Please see the attached report.

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Queensland Rail

Review of the West Moreton System reference tariff methodology

Queensland Rail

Supporting analysis for submission to the QCA

15 July 2014

pwc

Executive summary

In June 2013 Queensland Rail submitted a proposed reference tariff of $22.22/'000 gross tonne kilometres (gtk) for coal users on the West Moreton System, to be applied from 1 July 2013. The tariff was derived using a depreciated optimised replacement cost (DORC) methodology.

In its June 2014 consultation paper, the Queensland Competition Authority (QCA) did not accept this tariff and instead put forward two alternative options. The first option adjusted Queensland Rail's DORC assumptions to arrive at a reference tariff of $17.21/'000 gtk (23 per cent lower than the Queensland Rail proposal). The second option followed a 'line in the sand' approach, only including assets commissioned after 1995, and valuing these using a 'historic cost' approach that is similar in some respects to a Depreciated Actual Cost (DAC) approach. This option led to a reference tariff of $13.59/'000 gtk (39 per cent lower than the Queensland Rail proposal).

PricewaterhouseCoopers (PwC) has been engaged by Queensland Rail to analyse and comment on the methodologies applied by the QCA in reaching two proposed reference tariffs.

In our view the application of a line in the sand / 'historic cost' approach to valuing Queensland Rail's assets is inappropriate. Regulatory precedent overwhelmingly supports the application of the DORC methodology in order to value assets owned by a regulated business. The QCA has been an ardent advocate for the application of DORC in the past.

The decision to treat pre-1995 assets as 'sunk' and in effect assign a scrap value is inconsistent with regulatory precedent. The QCA has previously stated that exclusion of assets on the ground that they are sunk fails to provide incentives for the better management of assets or for future investment.

Further, the decision to draw a line in the sand at 1995 appears arbitrary. The QCA has suggested this is when significant traffics on the West Moreton System commenced, however as noted by B&H in its review, coal has been a regular traffic on the network since 1982. If 1995 has been chosen to align with the corporatisation of Queensland Rail, we believe this is irrelevant. The primary issue to be determined is the present day replacement cost of a network configuration that provides the same level of service of the current network – this is most accurately done using a DORC approach.

Our report also examines the methodology applied by the QCA to arrive at its adjusted DORC valuation applied for deriving the reference tariff under the first option. It appears that financing costs, including interest during construction, and transaction costs (associated with accessing capital funding), have not been included in the DORC value. This is inconsistent with regulatory precedent as the inclusion of both costs is standard regulatory practice, and has been accepted by the QCA in the past.

In addition, the rationale for reducing the value of pre-1995 assets by 22 per cent to account for the metropolitan blackout period is flawed and introduces asset stranding risk. This approach is effectively the same as the QCA taking the view that Queensland Rail was imprudent in its design of the pre-1995 assets, and has designed and constructed a network with significant capacity. To our knowledge, there has been no suggestion that the pre-1995 network was 'over-built'. We believe that a more appropriate treatment is to spread the same cost base over a comparatively lower volume base owing to the reduced number of train paths.

Finally, there are a number of issues with the approach used to allocate the asset base between coal and non-coal services, including if the intention is to apply a 'once-off' setting of the cost allocator and the treatment of works where an access facilitation deed has been entered into. . These issues will need further consideration by the QCA before an approach is determined to estimate a coal service asset base.

Contents

1 Introduction

1.1 Background

Queensland Rail commenced business independently from the then QR National corporate group (now Aurizon) on 1 July 2010. Queensland Rail's primary business is the delivery of public transport through the provision of passenger rail services, and supporting private freight services through the provision of rail infrastructure.

Queensland Rail owns and operates the West Moreton System which extends from Macalister to the Port of Brisbane. Coal train services that use the system are subject to a reference tariff determined by the Queensland Competition Authority (QCA). The West Moreton System is currently subject to the terms of the access undertaking approved by the QCA in 2008, as amended to include new tariffs and tariff-setting rules in June 2010.

Queensland Rail made a submission to the QCA in June 2013 that included a proposed tariff for West Moreton System coal traffics of $22.22 per 1000 gtk in 2013-14, approximately 20 per cent higher than the current 2013-14 price of $18.56/'000 gtk.

In response, the QCA released a consultation paper in June 2014 which provided two different approaches for calculating a tariff for this system. Both options result in a significantly lower price compared with Queensland Rail's proposal ($17.21/'000 gtk and $13.59/'000 gtk, respectively).

PwC has been engaged by Queensland Rail to analyse and comment on the methodology applied by the QCA in reaching its two proposed reference tariffs, particularly in the context of relevant regulatory precedent for valuing network assets.

1.2 Purpose and approach

Queensland Rail is seeking comment on the methodology applied by the QCA to arrive at the proposed tariffs included in its discussion paper. Our report examines:

- shortcomings associated with applying a historical cost roll-forward approach;
- the correct application of the depreciated optimised replacement cost (DORC) approach when estimating the opening regulatory asset base (RAB), namely the inclusion of costs associated with financing;
- the argument put forward by the QCA to optimise out a proportion of the asset value due to the metropolitan system blackout period; and
- the allocation of the asset base to coal services.

In reviewing these matters, this report draws on relevant regulatory precedent.

2 West Moreton System reference tariff

2.1 Current reference tariff

The West Moreton System is currently subject to the terms of the 2008 access undertaking, as amended by a Transfer Notice at the time of separation of the former QR Limited into Aurizon (formerly QR National) and Queensland Rail on 1 July 2010.

In its 2010 DAU, the then QR Network submitted a reference tariff for the West Moreton System that was largely consistent with the QCA's December 2009 draft decision. The QCA proposed to approve this tariff in its subsequent draft decision on pricing aspects of the 2010 DAU, and gave final approval to West Moreton System tariffs in its final decision to approve an extension of the 2008 undertaking in June 2010.

At the time, QR Network rejected the QCA's methodology, particularly treatment of the capital base, investment, and operating and maintenance spending. Despite not accepting the rationale behind the draft decision, QR Network accepted the proposed tariff and tariff structure in its 2010 DAU.[1]

This gave rise to a tariff of $16.81/'000 gtk based on the following:

- a DORC-based asset valuation;
- reducing the allocation of pre-1995 assets to coal by 20 per cent to reflect the metropolitan blackout period;
- extending the tariff west of Rosewood across the metropolitan system;
- reducing maintenance and operating costs proposed by QR Network; and
- applying the same weighted average cost of capital (WACC) as for central Queensland.

In order to address concerns that a purely volume-based charge could potentially lead to windfall gains to QR Network, the tariff was split into two components, a volume based charge of $8.41/'000 gtk and a cost per train path of $3,962.

Since this time Queensland Rail has sought a number of extensions to the 2008 access undertaking, the most recent extending the expiry date to 31 December 2014 (or earlier, should the QCA approve Queensland Rail's June 2013 submission prior to end of the year). The reference tariff has been escalated by the rate of inflation since the 2010 DAU extension, resulting in a 2013-14 price of $18.56/'000 gtk.[2]

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1 Queensland Competition Authority (2010), *QR Network's 2010 DAU – Tariffs and Schedule F (Draft Decision)*. Available at: http://www.qca.org.au/getattachment/8ea773a0-b4fc-49ec-aaee-e8dde3ab2da2/QCA-Draft-Decision-(Pricing).aspx

2 Queensland Rail recently notified an increase to apply from 1 July 2014 for West Moreton System Reference Tariffs. The new rate (for Surat Basin coal) is $9.68/'000gtk plus $4,511.51 per train path.

2.2 Queensland Rail proposed tariff

Since 2012 Queensland Rail has made a number of submissions seeking to replace the 2008 access undertaking; submitting DAUs to the QCA in March 2012 and February 2013. In June 2013 Queensland Rail made a submission to the QCA in relation to a proposed tariff for the West Moreton System coal traffic of $22.22/'000 gtk, which would be applied from 1 July 2013.[3]

The proposed tariff was derived using a building blocks approach and based on the assessment of the following factors:

- opening asset value;
- capital expenditure;
- weighted average cost of capital (WACC);
- asset depreciation;
- asset indexation;
- maintenance costs;
- other operating costs; and
- forecast volumes.

Of particular note is Queensland Rail's application of a DORC approach to derive an opening asset value for the West Moreton System. Queensland Rail based its opening asset value on analysis conducted by Everything Infrastructure (EI) as part of the 2008 draft access undertaking, as at 1 August 2007.[4] However Queensland Rail proposed to apply two adjustments relating to the incorrect allocation of tunnel assets and the quantum of reduction applied to the West Moreton System Asset Replacement Project.

2.3 QCA tariff options

The QCA did not accept Queensland Rail's proposed tariff, and is instead seeking comment on two alternative tariff options in the context of low coal prices resulting in significant cost pressures for miners.[5] Measures not accepted by the QCA included:

- Queensland Rail's proposal to apply a 15 per cent metropolitan blackout factor (the QCA instead increased this to 22 per cent); and
- Queensland Rail's proposed maintenance and operating expenditure, which the QCA has reduced based on analysis carried out by B&H Strategic Services (B&H).

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3 Once the final tariff is approved, it will be backdated to July 2013 including interest.

4 Everything Infrastructure was commissioned by the QCA to review the initial DORC evaluation conducted by Aurecon Hatch for QR Network as part of its 2008 DAU submission.

5 Queensland Competition Authority (2014), *Consultation Paper - Queensland Rail's Western System Coal Tariffs*. Available at: http://www.qca.org.au/getattachment/4e292b85-3670-46e6-9ef9-f691f64865b2/QCA-Consultation-paper-on-western-system-coal-tari.aspx

The options put forward by the QCA are summarised below:

Option 1: QCA revised DORC option

The QCA engaged B&H to review a number of aspects of Queensland Rail's proposal, including the application of the DORC methodology.

B&H estimated a DORC opening value for the West Moreton System that aligned closely with Queensland Rail's proposal ($427.0 million compared with $419.6 million). The different valuations stemmed from different assumptions of the estimated expired life of assets and the condition of the assets.

The QCA, however, allocated a smaller proportion of the asset base to coal related train paths, resulting in a coal-specific opening asset value of $259.0 million compared with Queensland Rail's proposed value of $292.6 million.

Further, the QCA reduced assumed maintenance costs by $10 million and operational expenditure by $3.1 million over the regulatory period, based on B&H's analysis.

These adjustments resulted in a reference tariff of $17.21/'000 gtk, 23 per cent lower than the Queensland Rail proposal.

Option 2: Historic cost roll-forward option

As an alternative to applying a DORC approach, the QCA proposed a historic cost roll-forward option, whereby pre-1995 assets are treated as sunk, and are assumed to have no recoverable value, while all capital expenditure post-1995 is attributed to coal and assumed to be recoverable through the reference tariff. This scenario appears to have been developed as a result of an argument put forward by certain stakeholders that because the then Queensland Rail had assigned a scrap valuation to the West Moreton System in 1995, it could not expect to recover the full DORC value of its pre-1995 assets.[6] For clarification, the scrap valuation was not related to the economic life of those assets.

Although labelled a 'historic cost' approach, assets commissioned before 1995 are valued using a particular methodology (in this case, treated as sunk and valued at zero), which is similar to a 'line in the sand' approach.

For the post-1995 assets, the QCA's 'historic cost approach' estimates a RAB as at 1 July 2013 by adding all actual capital expenditure incurred following 1995 and depreciating this capital expenditure in line with its asset life to 'roll forward' the RAB to 1 July 2013. This approach is similar in nature to the depreciated actual cost (DAC) methodology which values assets at actual cost and then adjusts this by the proportion of the asset's service potential which has expired. However, the key distinction between the QCA's historic cost approach and a DAC approach is that the QCA has revised the assets lives of each of the assets in line with the advice from B&H for depreciation purposes.

The appropriateness of the QCA's approach when calculating an opening asset value is discussed further in the next section.

The QCA has estimated that only including post-1995 assets and allocating 100 per cent of these to coal will yield an opening asset value in the order of $133.3 million. This results in a reference tariff of $13.59/'000 gtk, 39 per cent lower than the Queensland Rail proposal.

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6 Queensland Competition Authority (2014), Consultation Paper - *Queensland Rail's Western System Coal Tariffs*. Available at: http://www.qca.org.au/getattachment/4e292b85-3670-46e6-9ef9-f691f64865b2/QCA-Consultation-paper-on-western-system-coal-tari.aspx

3 Comparison of asset valuation methodologies

The QCA has put forward two options for arriving at a reference tariff, with significantly different methodologies applied in each case:

- Under option 1, the tariff was derived using a revised DORC approach.
- Under option 2, the tariff was derived using a historic cost approach which uses a modified form of a 'line in the sand' / DAC approach.

The following section discusses each methodology and examines relevant regulatory precedent for estimating opening asset values.

3.1 The DORC approach

A DORC valuation estimates the cost of replacement via commercially efficient application of modern technology to deliver the current capacity and performance characteristics of the existing asset, allowing for age via depreciation.[7]

Australian regulators, including the QCA, have overwhelmingly favoured the application of DORC in the past with regard to estimating asset values owned by monopoly entities. Benefits of a DORC approach, as noted by the QCA[8], include the following:

- An optimisation process that ensures that obsolete, poorly sized or poorly located assets are not included in the capital base and therefore not paid for by users.
- Inflationary effects are accounted for, allowing asset values to be compared accurately using current costs.
- Asset values are established that minimise incentives for by-pass of the network (by-pass occurs when it would be cheaper for network users to construct and operate an alternative service).

Further, the Authority notes that the rationale for using DORC to value assets is that it provides a greater indication of the opportunity cost to the owner of the asset, and is therefore more consistent with the value that would be ascribed to the asset in a competitive market.

A summary of instances where DORC has been applied by Australian regulators is provided below.

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7 Australian Rail Track Corporation (2011), *Hunter Valley Coal Network Access Undertaking*. Available at: http://www.artc.com.au/library/AS_HV_Undertaking_2011.pdf

8 Queensland Competition Authority (1999), *Queensland Rail – Draft Undertaking Asset Valuation, Depreciation and Rate of Return, Issues Paper*. Available at: http://www.qca.org.au/getattachment/536e5b5a-68c5-474d-9bfd-fb64afd124de/Asset-Valuation,-Depreciation-and-Rate-of-Return.aspx

3.1.1 Australian Competition and Consumer Commission

Interstate rail network

The Australian Competition and Consumer Commission (ACCC), in its draft decision for the Australian Rail Track Corporation's (ARTC) interstate rail network access undertaking concluded that DORC:[9]

"is consistent with common Australian regulatory practice in rail and in other areas and is well understood…the ACCC considers that DORC is an acceptable asset valuation method for ARTC's network assets".

Hunter valley coal network

The ARTC's Hunter Valley coal network (also regulated by the ACCC) is similarly valued using a DORC approach, with the 2011 access undertaking rolling forward the RAB established as at 1 July 1999[10] (the DORC asset base was initially approved by the Independent Pricing and Regulatory Tribunal (IPART), which was the regulator of the Hunter Valley coal network at the time).

3.1.2 Independent Pricing and Regulatory Tribunal

NSW Rail Access Regime

IPART reviewed aspects of the NSW Rail Access Regime in 1999, including an appropriate asset valuation methodology for valuing the Rail Access Corporation's (RAC) Hunter Valley coal assets. IPART endorsed an interim DORC value in its final report[11] in order to set a ceiling rate of return. In adopting a DORC approach, IPART noted that:

- a DORC based approach was supported by all of RAC's major customers;
- while the DORC approach is used to set a ceiling rate of return (i.e. maximum price), final prices are negotiated to be less than or equal to the ceiling test; and
- although DORC may produce a higher value than other approaches, this is not unreasonable for the purpose of setting a maximum price.

Further, IPART recommended that the DORC value be determined by an independent consultant and reviewed every five years.

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9 Australian Competition and Consumer Commission (2008) *Draft Decision – Access Undertaking Interstate Rail Network Australian Rail Track Corporation*. Available at: http://www.accc.gov.au/system/files/ACCC%20final%20decision%20on%20the%20ARTC%20Interstate%20Rail%20Access%20undertaking.pdf

10 Australian Rail Track Corporation (2011) *Hunter Valley Coal Network Access Undertaking*. Available at: http://www.artc.com.au/library/AS_HV_Undertaking_2011.pdf

11 Independent Pricing and Regulatory Tribunal (1999) *Aspects of the NSW Rail Access Regime*. Available at: http://www.artc.com.au/library/IPART_Final_Report_1999.pdf

3.1.3 Queensland Competition Authority

Queensland Rail Access Undertaking

The QCA has consistently accepted a DORC methodology to value Queensland Rail assets across a number of recent access undertaking reviews.

The QCA's December 2000 draft decision, which was unchanged in its final decision, on the then QR Limited's draft undertaking[12] stated:

"The Authority considers ***that the DORC method presents the most appropriate theoretical approach for asset valuation.*** *The disadvantages attached to DORC can be largely overcome by ensuring appropriate technical experts are involved in the process and ensuring the asset valuation exercise itself is conducted in as transparent a manner as possible. With this in mind, the Authority agrees with the majority of stakeholders, including QR, that a DORC approach to asset valuation should be adopted".*

The subsequent 2005 decision regarding QR Limited's draft undertaking developed an opening asset value based on a roll-forward of the Authority's approved DORC valuation in 2001.[13]

A DORC methodology was again applied in the QCA's 2009 DAU draft decision. Queensland Rail has drawn on elements of the Authority's 2009 draft decision in developing its proposed reference tariff for 2013-14. In its consultation paper for the West Moreton System reference tariff, the QCA has stated that as the then QR Network did not accept aspects of its 2009 proposal, the Authority never formed a final view on an appropriate methodology for setting an opening asset value.[14]

While QR Network at the time raised a number of concerns surrounding the QCA's approach, the use of a DORC methodology itself was never disputed. DORC was accepted by both parties as the appropriate methodology for setting a reference tariff, though issues relating to the appropriate assumptions to apply to the DORC valuation were not resolved.

Dalrymple Bay Coal Terminal Draft Access Undertaking

In the 2006 access undertaking for the Dalrymple Bay Coal Terminal (DBCT), assets were valued using a single stage DORC approach. In its 2004 draft decision, the QCA noted that:[15]

"The efficient use of resources requires pricing and investment decisions to be based on the real economic costs of usage in alternative activities (i.e. opportunity cost). In this regard, a current replacement cost valuation such as DORC is regarded as providing more relevant measures of value for the purposes of decision making than valuation based on historical cost."

In its 2010 DAU, DBCT Management proposed to roll forward the 2004 DORC value to account for capital expenditure, depreciation and inflationary gain. This approach was approved by the QCA.[16]

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12 Queensland Competition Authority (2000) *Draft Decision on QR's Draft Undertaking Volume 3 – Reference Tariffs*

13 Queensland Competition Authority (2005) *Decision QR's 2005 Draft Access Undertaking*.

14 Queensland Competition Authority (2014), *Consultation Paper - Queensland Rail's Western System Coal Tariffs*. Available at: http://www.qca.org.au/getattachment/4e292b85-3670-46e6-9ef9-f691f64865b2/QCA-Consultation-paper-on-western-system-coal-tari.aspx

15 Queensland Competition Authority (2004) *Draft Decision Dalrymple Bay Coal Terminal Draft Access Undertaking*. Available at: http://www.qca.org.au/getattachment/dd6f9368-3c28-44e5-9350-7549981b461e/2004-Draft-Decision-re-DBCT-Draft-Access-Undertaki.aspx

Gladstone Area Water Board Investigation of Pricing Practices

In its 2002 review of Gladstone Area Water Board's (GAWB) pricing practices, the QCA recommended that assets be valued on the basis of DORC principles.[17] In recommending a DORC approach, the Authority stated:

"DORC ensures that over-capacity, over-engineered and over-designed assets are not included in the asset base and consequently are not paid for by customers. It allows for technological change as assets can be valued in a way that reflects current technology. Sub-optimal excess capacity and redundant assets are excluded from the asset base."

The QCA went on to state that using a replacement cost approach such as DORC more closely approximates the actual costs likely to be faced by a hypothetical new entrant to a market, thereby more closely replicating outcomes of a competitive market. While acknowledging that DORC requires more subjective judgement in estimating an optimal network configuration, the Authority noted that this can be addressed by applying appropriate technical expertise in the process.

In its 2005 investigation of GAWB's pricing practices[18], the Authority again endorsed a DORC approach, further noting that DORC:

- allows for technological change so that assets can be valued in a way that reflects current technology; and
- allows a business's financial records to be expressed in current terms and makes the relationship between costs and revenues more meaningful.

This approach was again adopted by the QCA in its 2010 investigation, however alternative approaches were applied to certain assets categories, including land (market value), easements (indexed historical costs) and relocated assets (historical costs).

Regulation of Electricity Distribution

In 2001, the QCA adopted a DORC approach to value the majority of assets owned by Queensland electricity distributors, with the exception of easements due to the unusual nature of the assets and the likely impact on prices of changing the valuation method from the previous historic cost approach.[19]

In adopting a DORC approach, the QCA outlined advantages similar to those noted above, including the benefits of the optimisation process, the allowance for technological change, addressing the incompatibility issues associated with DAC and the establishment of asset values that will minimise incentives for inefficient by-pass of the network.

Further, the QCA noted the overwhelming support for the DORC approach by stakeholders and regulators in other jurisdictions.

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16 Queensland Competition Authority (2010) *Final Decision Dalrymple Bay Coal Terminal 2010 Draft Access Undertaking*. Available at: http://www.qca.org.au/getattachment/4891b780-32f2-4f60-9ab2-9d46fe21bb4a/2010-DBCT-Draft-Access-Undertaking.aspx

17 Queensland Competition Authority (2002) *Final Report Gladstone Area Water Board: Investigation of Pricing Practices*. Available at: http://www.qca.org.au/getattachment/fb7aa015-73cb-4f37-84b8-b4de9bdf5fa4/Investigation-of-Pricing-Practices.aspx

18 Queensland Competition Authority (2005) *Final Report Gladstone Area Water Board: Investigation of Pricing Practices*. Available at: http://www.qca.org.au/getattachment/ac7f6c6e-a312-4453-a96d-6e701a53bf30/Investigation-of-Pricing-Practices.aspx

19 Queensland Competition Authority (2001) *Final Determination Regulation of Electricity Distribution*. Available at: http://www.qca.org.au/getattachment/46d0e97e-e4e8-4df9-baa2-55dd1776494d/Final-Determination-Regulation-of-Electricity-Dist.aspx

While the QCA decided to revalue distribution asset values in its 2005 determination, DORC was once again chosen as the preferred methodology to determine the RAB.[20]

Assessment of certain pricing matters relating to the Burdekin River Irrigation Area

In a position paper examining the appropriate approach for valuing water assets in the Burdekin-Haughton (owned by SunWater), the QCA again endorsed DORC as the appropriate asset valuation methodology when determining the maximum allowable revenue for a monopoly services provider.[21]

The QCA acknowledged that different approaches may be adopted for different reasons under different circumstances. In this context, historic asset values determined for taxation and accounting purposes are not relevant for pricing purposes. In order to value an asset base for monopoly pricing purposes, the Authority considered that DORC was the appropriate methodology.

3.1.4 Summary

Australian regulators have overwhelmingly endorsed a DORC approach when valuing asset bases for pricing purposes.

DORC is widely regarded to provide the most accurate estimate of the opportunity cost of the assets employed to deliver services, and therefore provide efficient pricing signals with regard to future investment decisions.

The QCA has been a prominent advocate of the DORC approach in the past, utilising it to valuing asset bases for numerous regulated entities including Queensland Rail, DBCT Management, Gladstone Area Water Board, SunWater, Energex and Ergon.

3.2 Depreciated actual cost approach

When applying a cost-based approach to determining an opening asset value, the most common alternative to DORC is DAC.[22]

An actual cost approach uses the actual dollar cost of acquiring an asset, including relevant financing costs during construction, as the final value of the asset.[23] The age of the asset can then be accounted for via depreciation to arrive at a DAC valuation. Asset values can also be indexed to account for inflation to allow for comparisons in today's dollars, resulting in an indexed DAC valuation.

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[20] Queensland Competition Authority (2005) *Final Determination – Regulation of Electricity Distribution*. Available at: http://www.qca.org.au/getattachment/2eb2768b-b3a7-4708-bd1e-387702278919/Final-Determination-Regulation-of-Electricity-Dist.aspx

[21] Queensland Competition Authority (2002) *Position Paper No. 3 – Asset Valuation Approaches*. Available at: http://www.qca.org.au/getattachment/67c00d8f-0022-462e-a3c0-581f1704df5a/Draft-Position-Paper-3-Asset-Valuation.aspx

[22] Also referred to as the depreciated historical cost approach.

[23] Queensland Competition Authority (2002) *Gladstone Area Water Board: Investigation of Pricing Practices*. Available at: http://www.qca.org.au/getattachment/fb7aa015-73cb-4f37-84b8-b4de9bdf5fa4/Investigation-of-Pricing-Practices.aspx

There are some benefits associated with this approach, for example, an actual cost approach can avoid the expense and subjectivity associated with DORC, and historic costs can be easier to establish than replacement costs when sufficient data are available.[24] Conversely, there are a number of serious methodological issues that have been raised on multiple occasions by regulators in the past. These are summarised below.

3.2.1 Regulatory comment on DAC approach

Australian Competition and Consumer Commission

In assessing the appropriate methodology to value ARTC's interstate rail network, the ACCC noted a criticism often levelled at the application of a DAC value, commenting:[25]

"The argument that historical depreciated values are the appropriate RAB values, as opposed to DORC values, is dubious. Historical values will rarely reflect current opportunity cost to provide optimal service today".

Independent Pricing and Regulatory Tribunal

In its review of aspects of the NSW Rail Access Regime, IPART noted a number of issues associated with a DAC approach when valuing assets for pricing purposes, including:[26]

- historical costs generally bear little resemblance to cash flows of today and are therefore irrelevant, particularly in the case of long-lived assets;
- even if indexed, prices based on historical costs will not give consumers the correct economic price signals in relation to cost of the service today.

IPART also noted that from a practical perspective, when construction cost and maintenance records are either incomplete or non-existent, a DAC approach may in fact be more time consuming than alternative methodologies.

Queensland Competition Authority

The QCA has regularly noted the serious flaws associated with applying DAC valuations for pricing purposes in various determinations and reviews. In its 2002 investigation of pricing practices for GAWB[27], the Authority stated that despite advantages in terms of the availability of data, historic cost valuation methods:

- do not have any relation to market values or replacement costs and therefore do not provide any relevant signals for future investment or consumption by users;
- may lead to price shocks when assets are replaced;
- even when adjusted for inflation, fail to capture the impact of technological change or over-engineering.

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[24] Queensland Competition Authority (2005) *Final Report Gladstone Area Water Board: Investigation of Pricing Practices*. Available at: http://www.qca.org.au/getattachment/ac7f6c6e-a312-4453-a96d-6e701a53bf30/Investigation-of-Pricing-Practices.aspx

[25] Australian Competition and Consumer Commission (2008) *Draft Decision – Access Undertaking Interstate Rail Network Australian Rail Track Corporation*. Available at: http://www.accc.gov.au/system/files/ACCC%20final%20decision%20on%20the%20ARTC%20Interstate%20Rail%20Access%20undertaking.pdf

[26] Independent Pricing and Regulatory Tribunal (1999) *Aspects of the NSW Rail Access Regime*. Available at: http://www.artc.com.au/library/IPART_Final_Report_1999.pdf

[27] Queensland Competition Authority (2002) *Final Report Gladstone Area Water Board: Investigation of Pricing Practices*. Available at: http://www.qca.org.au/getattachment/fb7aa015-73cb-4f37-84b8-b4de9bdf5fa4/Investigation-of-Pricing-Practices.aspx

In its subsequent investigation of GAWB pricing practices in 2005[28], the Authority reiterated issues with DAC raised in its 2002 investigation, further noting that a lack of historical information is often a practical impediment to the use of historic costs.

The QCA has regularly reiterated these concerns in a number of separate investigations and determinations for regulated entities in Queensland.[29]

3.2.2 Regulatory precedent for application of actual costs

There have been instances where regulators have opted to apply an actual cost approach to value certain assets. These examples are summarised below.

Land

In reviewing GAWB's pricing practices in 2005[30], the QCA opted to apply an alternative approach to DORC when valuing land for buildings, reservoirs and treatment plants.

The QCA determined that for land assets, the appropriate valuation methodology was the market value. This was based on an evaluation of the highest and best alternative use of the land. The Authority noted that in the case of land, the use of a market value is likely to provide a better indication of the likely opportunity cost and more consistent with the likely asset value to be faced by a new entrant.

Easements

The correct approach to valuing easements has been the subject of extensive debate amongst various regulators and stakeholders, most notably in the electricity distribution sector.

In reviewing GAWB's pricing practices in 2005[31], the QCA determined that the appropriate approach to valuing easements was to index the historical acquisition cost, thus maintaining the original price in real terms. This was based on its 2004 decision regarding the treatment of easements for electricity distributors.[32] The Authority has noted in the past that easements are a unique asset, and for a number of reasons a DORC approach may not be appropriate as a valuation methodology[33], including:

- easements are generally not replaced, therefore a replacement cost methodology may be invalid;
- easements have limited alternative economic use; and
- DORC may result in significant increases in asset values depending on the prior methodology applied, leading to price shocks for consumers (though this can be dealt with through a transition arrangement).

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[28] Queensland Competition Authority (2005) *Final Report Gladstone Area Water Board: Investigation of Pricing Practices.* Available at: http://www.qca.org.au/getattachment/ac7f6c6e-a312-4453-a96d-6e701a53bf30/Investigation-of-Pricing-Practices.aspx

[29] Including Queensland Rail, DBCT Management, SunWater (Burdekin-Haughton), Energex and Ergon.

[30] Queensland Competition Authority (2005) *Final Report Gladstone Area Water Board: Investigation of Pricing Practices.* Available at: http://www.qca.org.au/getattachment/ac7f6c6e-a312-4453-a96d-6e701a53bf30/Investigation-of-Pricing-Practices.aspx

[31] Queensland Competition Authority (2005) *Final Report Gladstone Area Water Board: Investigation of Pricing Practices.* Available at: http://www.qca.org.au/getattachment/ac7f6c6e-a312-4453-a96d-6e701a53bf30/Investigation-of-Pricing-Practices.aspx

[32] Queensland Competition Authority (2004) *Decision - Electricity Distribution: Valuation of Easements.*

[33] Queensland Competition Authority (2001) *Final Determination Regulation of Electricity Distribution*. Available at: http://www.qca.org.au/getattachment/46d0e97e-e4e8-4df9-baa2-55dd1776494d/Final-Determination-Regulation-of-Electricity-Dist.aspx

As such, the QCA determined that using the historic acquisition price, with the real value maintained via indexation, was an appropriate methodology for valuing these assets.

In putting forward its historic cost roll-forward option for valuing Queensland Rail's assets, the Authority noted the regulatory precedent of using an actual cost approach for valuing easements. In our view, this is not relevant to Queensland Rail's circumstances.

Easements have unique characteristics that make them unsuitable for valuing using a DORC approach. As stated by the QCA in a previous decision[34], easements are rights acquired over land for a specific purpose – this is not the same as owning the land on which the easement passes. Thus the value of the easement needs to be clearly separated from the opportunity cost of owning the land itself. As far as applying a DORC approach to easements – easements generally do not depreciate, there is no meaningful capacity for optimisation, and it is difficult to determine a replacement cost other than by reference to historic circumstances of the particular easement.

Due to these exceptional reasons, DORC is not applied in this specific instance. However its use in general is overwhelmingly supported by regulators, including the QCA in past determinations, and as such its unsuitability in relation to easements is not relevant to valuing Queensland Rail's RAB.

3.3 Drawing a 'line in the sand'

In certain instances regulators draw a 'line in the sand' when assessing a firm's asset values, effectively applying different methodologies to value assets before and after a given date. This approach has been applied by the QCA in its historic cost roll-forward option, in which assets built or purchased by Queensland Rail prior to 1995 are assigned a zero value (treated as 'sunk' assets), with assets built or purchased after this date incorporated into the asset base.

While an argument can be mounted to treat assets before and after a given date using separate methodologies, regulatory precedent for doing so has been in circumstances vastly different from those under which the QCA has proposed in relation to the West Moreton reference tariff.

To demonstrate examples of appropriate situations where a line in the sand was used, we have drawn on past regulatory examples summarised below.

NSW water entities – developer charges

In 2000, IPART reviewed its process for regulating the maximum prices that four metropolitan water entities could charge for various services.[35] As part of this review, IPART determined to draw a line in the sand and define assets as either being pre- or post-1996 assets. This was necessitated by the change in approach of IPART to move to a periodic review of developer charges, whereas initially it was envisioned that they would not be revisited once set.

This avoided a situation where an asset initially classified as a 'future' asset would be subject to a lower discount rate and therefore lower rate of return following a regulatory review in which the asset became an 'existing' asset (due to it being commissioned in between reviews).

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34 Queensland Competition Authority (2004) *Decision - Electricity Distribution: Valuation of Easements.*

35 Independent Pricing and Regulatory Tribunal (2001) *Department of Land and Water Conservation Bulk Water Prices*. Available at: http://www.ipart.nsw.gov.au/files/7ef78505-797e-48b9-8ed0-a16200dd88aa/Determination_and_Final_Report_-_SWC_HWC_GCC_WSC_-_Developer_Charges_from_1_October_2000.pdf

Thus pre-1996 assets and post-1996 assets that had already been commissioned were valued using a modern engineering equivalent replacement asset approach (MEERA), whereas post-1996 assets not yet commissioned would be valued using an actual efficient cost approach at the time of commissioning, and then using a MEERA approach at the time of the next review.

In this instance, a line in the sand approach was adopted in order to overcome issues associated with IPART's decision to change its review process (moving to review developer charges at regular intervals). This would only have implications over a relatively short time frame, as charges would be reviewed every five years, and an asset that was commissioned between reviews would move to a MEERA evaluation after a relatively short period of time.

NSW Department of Land and Water Conservation bulk water prices

In 2001, IPART determined that water assets put in place prior to 1 July 1997 should not be included in the Department of Land and Water Conservation's asset base for pricing purposes.[36]

In reaching this view, IPART noted that many rural water infrastructure assets were put in place by the government in the late nineteenth and early twentieth century as a result of the government's desire to encourage development of the agriculture industry. It was not until 1994 that the government signalled plans to recover the full economic cost of bulk water service.

Given that irrigators had up to this point planned their activities and operated on the basis that the provision of water infrastructure would be heavily subsidised, IPART formed the view that it was not reasonable to recover depreciation or a rate of return on assets in place prior to 1 July 1997.

3.4 Treatment of pre-1995 assets

The QCA's historic cost roll-forward option proposes to treat all West Moreton System assets built or purchased by Queensland Rail prior to 1995 as 'sunk' – effectively assigning a zero value and removing them from the opening asset base. This approach appears to stem from the assertion by New Hope in its submission that Queensland Rail should not be afforded a return on assets for which it had previously assigned scrap value.[37]

While there have been past instances where a line in the sand approach has been adopted, and a zero value applied to assets prior to a certain date (see section 3.3), in our view this is not relevant to the current circumstances.

When IPART adopted this approach in setting rural bulk water prices, it formed the view that irrigators had based their business decisions on the assumption that the government would continue to subsidise water infrastructure. This has been the long-term policy of the government in order to promote rural and agricultural development, and the subsequent shift to endorse full cost-recovery was not consistent with past policy. The regulator determined that it would be unreasonable for the government to earn a return on assets that were previously assumed to be subsidised, with pre-1997 assets subsequently removed from the asset base.

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36 Independent Pricing and Regulatory Tribunal (2001) *Department of Land and Water Conservation Bulk Water Prices*. Available at: http://www.ipart.nsw.gov.au/files/a0f504bf-9ed6-4bfa-b33b-a27400bbf5bd/Determination_and_Final_Report_-_Department_of_Land_and_Water_Conservation_Bulk_Water_Prices_-_from_1_October_2001.pdf

37 New Hope Group (2013) *Queensland Rail's proposed Reference Tariff Reset*. Available at: http://www.qca.org.au/getattachment/53ff293e-ee15-4cbc-90e3-34d14e65a29a/New-Hope-Coal-Corporation.aspx

In the case of Queensland Rail's West Moreton System, users did not undertake coal haulage based on an expectation that the Queensland Government would subsidise the associated infrastructure. While the network was not initially designed to haul coal, and aspects of the infrastructure may not be fit for purpose, this does not preclude the application of a DORC approach and similarly does not suggest that assets built prior to mining companies becoming dominant users of the network should be excluded from the asset base.

In fact the QCA has applied this same reasoning in the past, noting in a position paper examining appropriate asset valuation approaches for the Burdekin Scheme:[38]

"Exclusion of assets on the grounds that they are sunk fails to provide management with the incentive to enhance shareholder value, and does not provide incentives for the better management of assets or for future investment".

The Authority went on to state:

- automatically valuing past assets at zero is not consistent with efficient outcomes that would prevail in a competitive market; and
- automatically valuing assets with no alternative use at zero is inconsistent with normal commercial practice.

Given this reasoning, it seems inconsistent for the Authority to put forward an option that treats certain assets as sunk simply because they were commissioned prior to a given date.

Further, selecting 1995 as the point in time by which to draw a line in the sand appears to be arbitrary. While the QCA suggests that this is when significant coal traffics commenced, the review carried out by B&H notes that coal has been a regular traffic on the West Moreton System network since 1982.[39] Indeed, it appears that the choice of 1995 as the point at which to draw a line in the sand is due to the corporatisation of the then Queensland Rail occurring at this time. This is explicitly stated in Aurizon's submission, which questions the validity of providing a return to Queensland Rail on capital expenditure incurred prior to corporatisation.[40]

In our view, the point at which Queensland Rail became a corporate entity is irrelevant – the primary issue to be determined is the present day replacement cost of a network configuration that provides the same level of service as the current network. DORC principles account for the age of the current asset via depreciation, and any sub-optimal assets are accounted for via the optimisation process.

Concerns raised by certain stakeholders that parts of the network are obsolete or not fit for purpose are addressed in the DORC methodology. In fact the logic behind undertaking the depreciation and optimisation steps is precisely to address such concerns: [41]

"an optimisation process…ensures that obsolete, poorly sized or poorly located assets are not included in the capital base and therefore not paid for by users".

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[38] Queensland Competition Authority (2002) *Position Paper No. 3 – Asset Valuation Approaches*. Available at: http://www.qca.org.au/getattachment/67c00d8f-0022-462e-a3c0-581f1704df5a/Draft-Position-Paper-3-Asset-Valuation.aspx

[39] B&H (2014) *Review of the Queensland Rail (QR) West Moreton System*. Available at: http://www.qca.org.au/getattachment/d4a9582c-6ccf-47bd-b0f3-3c9fe33f1fad/QCA-B-H-Report-on-western-system-costs-and-assets.aspx

[40] Aurizon (2013) *West Moreton Reference Tariff Submission*. Available at: http://www.qca.org.au/getattachment/59af77c4-8fc1-47e8-912f-88cc77eecbc0/Aurizon-Holdings.aspx

[41] Queensland Competition Authority (1999), *Queensland Rail – Draft Undertaking Asset Valuation, Depreciation and Rate of Return, Issues Paper*. Available at: http://www.qca.org.au/getattachment/536e5b5a-68c5-474d-9bfd-fb64afd124de/Asset-Valuation,-Depreciation-and-Rate-of-Return.aspx

Regulators have overwhelmingly favoured a DORC approach in the past, with the QCA being one of the most ardent advocates. Applying historic costs, even accounting for inflation, and drawing a line in the sand to exclude pre-1995 assets, does not accurately capture the opportunity cost of Queensland Rail's investment and therefore does not accurately capture the value of the asset base.

4 Deriving a RAB

Although the QCA has derived a RAB in relation to the West Moreton System by applying a DORC approach under option 1, we believe there are several issues in the way it has been derived. These issues relate to:

- how financing costs have been accounted for in applying the DORC approach;
- the optimisation of the RAB due to the metropolitan blackout period; and
- the allocation of the RAB between coal and non-coal services.

In this chapter, we examine each of these three matters in turn.

Our assessment of the DORC methodology does not consider specific inputs applied by B&H in developing its valuation. We understand that Queensland Rail has reviewed the composition of the DORC valuation and the allocation of the DORC value across asset classes and system segments and will comment separately on these matters.

4.1 Assessing QCA's application of DORC

4.1.1 DORC methodology

The objective of the DORC methodology is to estimate an asset's value, that when applied, will generate prices that align with outcomes expected under a workably competitive market, in the long run. This valuation approach derives asset values that would make a hypothetical new entrant indifferent to either:

- constructing a new asset (with service characteristics equivalent to the incumbent's facility) and bypassing the existing asset; or
- acquiring the incumbent's existing assets.

The standard approach adopted by economic regulators to determine a DORC value comprises the following:

- Estimate the replacement cost of the optimised existing assets with modern equivalents that provide the same level of service, known as a 'Modern Equivalent Asset' (MEA) approach. The MEA need not be for the replacement of assets identical to the existing facility, but refers to the lowest cost of replacing the *service potential* embodied in the existing network.
- Optimise the asset configuration to the most efficient level. In general, the optimisation step reduces total asset value as redundant or over-sized assets are removed from the asset base.
- Depreciate the new assets to account for the extent to which its service potential is less than for a new asset. Technically, depreciation should be based on the present value difference between the costs of operating/maintaining the existing asset relative to the new, MEA configuration. For simplicity, most DORC valuations apply a remaining useful life adjustment, typically by applying straight-line apportionment.

4.1.2 QCA's application of DORC

In response to an engagement by the QCA, B&H derived a DORC value in relation to the for Queensland Rail's West Moreton System as at 1 July 2013. B&H's DORC valuation was relied upon in the QCA's consultation paper to derive the West Moreton System's reference tariff under option 1.

B&H's DORC estimate is not a full 'first principles' valuation, but rather represents a revision to the previous valuation on the West Moreton System. B&H began with the 2007 optimised replacement cost (ORC) valuation developed by Connell Hatch (CH) and reviewed by Everything Infrastructure (EI), and then inflated this to 2013 values using CPI. The inflated value was then adjusted downwards owing to:

- depreciation that was estimated using B&H's own assessment of each asset's total and remaining useful life; and
- 'configuration deficiencies', which were defined as assets 'where the configuration of the actual asset is [of] a lesser standard than the configuration of the ORC asset, before any consideration of condition…'.[42]

4.1.3 Allowing for financing costs

From our review of B&H's DORC estimate, it appears that B&H has not made a reasonable allowance for financing costs in accordance with standard regulatory practice, which has the effect of understating the DORC estimate.

The replacement cost valuation step of the DORC approach typically involves assessing two parts of an asset's cost. The first is the physical costs of delivering MEA capital assets, and the second is the cost of financing the investment needed to build the relevant asset over an extended period of time. These financing costs represent:

- Interest during construction (IDC) – a cost that investors incur costs associated with financing an asset's construction well in advance of the asset earning revenue.
- Finance transaction costs – the cost to organise finance so that the asset's construction can be funded.

For an asset that is being constructed and not yet earning a return, it is standard regulatory practice to allow both IDC and finance transaction costs to be capitalised in that asset's value.

Indeed, the QCA has made allowances for financing costs in the past. IDC has previously been allowed to be capitalised in an asset's value by the QCA when it assessed the then QR Network Limited's 2009 draft access undertaking.[43] In addition, in 2005 the QCA provided Darymple Bay Coal Terminal an allowance for finance transaction costs in its 2005 draft access undertaking. [44]

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[42] B&H Strategic Services, *Review of the Queensland Rail (QR) West Moreton System,* May 2014, p.xi

[43] Everything Infrastructure, *QR Network's 2009 access undertaking assessment of West Moreton System Asset Valuation,* November 2009, p.14

[44] Refer QCA, *Dalrymple Bay Coal Terminal's Draft Access Undertaking*, April 2005, and also the QCA's subsequent decisions on the DBCT Short gain terminal expansion and 7X expansion

It is not apparent that financing costs were incorporated in EI's 2007 RC valuation for the West Moreton System, and therefore B&H's DORC value. EI describes the replacement cost approach applied to the 2007 West Moreton System opening RAB as being, for the majority of the assets by asset value, based on physical material costs. Although EI commented on incorporating IDC into the value of capital expenditure in its report, it is silent on the matter in respect to the opening RAB.[45] We understand from Queensland Rail that no IDC allowance was included in the original Connell Hatch valuation, and IDC only was included in respect to certain more recent capital projects, which account for a minority of the valuation.

The effect of omitting these two adjustments on the DORC is that the QCA has underestimated the appropriate value of the RAB for Queensland Rail's West Moreton network. Without access to detailed assumptions on the DORC valuation (including the time profile of MEA capital expenditures, and an appropriate time-specific WACC rate) it is not possible to precisely determine the extent to which the DORC is understated. However regulatory precedent suggests that failing to account for financing costs is significant, particularly in relation to assets with long construction lead times.

4.1.4 Revised asset lives and the impact on future capital expenditure

We understand that B&H in its review increased the total asset life for a significant portion of Queensland Rail's asset base. While this may have been reasonable for the existing set of assets, it should not bind decisions on the asset lives of future capital expenditure.

Assessing an asset's life involves a broad consideration of its economic usefulness, and at times an asset's economic life may not accord with its technical life. Regulators in the past have used asset lives shorter than an asset's technical life to accelerate depreciation owing to its relatively shorter economic usefulness. For future capital expenditure on Queensland Rail's West Moreton System, the extent to which an asset's economic life is different to its technical life will need to be considered in determining an asset's depreciable life.

4.2 Asset stranding and the metropolitan system blackout period

4.2.1 Metropolitan system blackout period

The metropolitan system blackout period (the blackout period) represents peak portions of a day where freight rail services cannot travel across the metropolitan rail network, as well as line closures due to maintenance on the metropolitan system. As rail access seekers need access to the metropolitan network to travel to their destination at the Port of Brisbane, the blackout period reduces the effective number of train paths available for coal traffic.

The effect of the QCA incorporating the lost train paths due to the blackout period is a proportionate reduction in the value of the affected West Moreton System RAB. The QCA argued that for assets that existed at or around the time that substantive coal exports commenced on the West Moreton System (i.e. the pre-1995 network), the asset value should be reduced to reflect the capacity sterilised by the blackout period.

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45 Everything Infrastructure, *QR Network's 2009 access undertaking assessment of West Moreton System Asset Valuation,* November 2009, pp.2, 3, 13, 14, 20, 23 and 27

Queensland Rail, in adopting the QCA's approach, acknowledged in its June 2013 submission that the blackout period does constrain capacity and previously estimated a 15 per cent reduction in the number of coal freight paths. The QCA disagreed and, based on advice from B&H, proposed that the blackout period factor should be 22 per cent.

4.2.2 Blackout period and the introduction of asset stranding risk

Reducing Queensland Rail's RAB due to the blackout period is inappropriately stranding its investment, and not allowing the business to fully recover its efficient costs. In general regulators allow regulated businesses to recover prudent and efficient costs, and typically disallow cost recovery if there is proof otherwise. For the QCA to not allow Queensland Rail to recover 22 per cent of the value of pre-1995 common system assets, it implicitly is taking a view that Queensland Rail was imprudent in its design of those pre-1995 assets. That is, based on the QCA's approach, Queensland Rail has designed 22 per cent additional unrequired capacity.

The QCA did not take this position, and in estimating a DORC did not optimise the pre-1995 common system assets due to imprudent or inefficient excess capacity. Although B&H's valuation identified certain 'configuration deficiencies', and both the preceding CH and EI valuations also included various optimisation adjustments, to our knowledge none have claimed that the pre-1995 network was manifestly 'over-built' relative to the current level of demand.

If the network has been designed and constructed prudently and efficiently, a more appropriate treatment of the impact of the blackout period is, rather than a reducing the RAB, to spread Queensland Rail's cost over a comparatively lower volume base.

Conceptually, this is similar to a rail network which delivers to a capacity constrained port. In this illustration the value of the (efficiently configured) upstream rail network is not reduced proportionately because of a capacity limitation at the terminal. Rather, the capital cost of the rail network must be shared across the comparatively lower level of throughput able to be accommodated at the port. The lumpy capacity characteristic of rail/port systems means that it is common for mismatches to exist between the nameplate capacity of either the rail or port facilities, with system capacity constrained to the lower of the two.

Even where the pre-1995 common system comprises capacity that theoretically is 'stranded' because of downstream capacity limitations, it is not obvious that the appropriate response is to deny cost-recovery for this capacity cost.

Regulators have allowed businesses to recover the cost of assets which have been efficiently incurred, but subsequently have inadvertently been stranded. The Ministerial Council on Energy's (MCE) Statement of Policy Principles on smart meters, for instance, allows electricity distribution businesses to recover the cost of investments that have been stranded by Government policy on a mandatory smart meter roll-out.[46] The ACCC has also allowed electricity transmission businesses to recover the cost of assets that have been stranded. It has provided an additional depreciation allowance to compensate for the lost revenues from the stranded asset.[47] The analogy here is that any capacity restriction imposed by the blackout period reflects, in part, the policy decisions of the State Government – to give passenger transit priority over coal – and the cost of this should not be attributed to Queensland Rail.

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46 MCE, 2008, Statement of Policy Principles- Smart Meters, 13 June, p. 1

47 ACCC, Queensland Transmission Network Revenue Cap: Decision, November 2001, p. 26

4.3 Allocating the RAB to coal-services

The West Moreton System is one that is shared between coal and non-coal users. To recognise the shared nature of the system, the QCA has proposed that the cost of the existing asset base be allocated to coal users based on the proportion of its contracted train paths.

This approach is not appropriate in the case of Queensland Rail because:

- a constant allocation to coal is not as economically efficient as an allocation that varies;
- it does not appropriately account for coal-specific works; and
- it is inconsistent with the existing Access Facilitation Deeds (AFDs).

4.3.1 Updating the cost allocator to provide positive incentives to Queensland Rail

The QCA proposed to allocate a share of common-system capital costs – both pre- and post-1995 assets – to the West Moreton System reference tariff based on the proportion of contracted train paths held by coal traffics. Based on current contract shares, this gives a percentage allocation of 72.6 per cent and is expected to remain constant for the foreseeable future.

We consider that greater economic efficiency will be achieved if this allocation proportion be allowed to vary. Given that the allocator is based on the number of coal train paths, if the allocator is allowed to vary Queensland Rail would be incentivised to maximise the number of train paths available for coal, and increase the efficiency of the network.

The AER recognised a similar issue when it considered its approach to allocate shared costs between regulated and non-regulated services. The AER recognised deficiencies where cost allocation shares were held fixed and not allowed to adjust over time:

"Unless service classifications change, cost allocation largely occurs only once… this semi-permanent cost allocation does not reflect new or growing unregulated revenue streams. Standard [regulated] control assets may earn additional unregulated revenues without [electricity] distributors removing any asset value from the standard control asset base or changing their asset allocation."[48]

The AER noted further:

"…the [National Electricity Rules] shared asset [allocation] mechanism deals with unregulated revenues in a way that cost allocation does not permit. …if asset owners earn additional regulated revenue streams from assets previously allocated to the standard control (or prescribed transmission) asset base, then we can adjust regulated revenues to reflect the new avenue for asset cost recovery."[49]

Thus the train-path allocation should be allowed to adjust over time, to ensure that the costs allocated to coal reference tariffs are appropriate, and to provide incentives for Queensland Rail to seek efficiency-enhancing changes to the network.

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[48] AER, *Shared asset guideline*, November 2013, p.48

[49] AER, *Shared asset guideline*, November 2013, p.48

4.3.2 Consistency with AFDs

Queensland Rail has for certain projects entered into AFDs with mining companies. The AFDs then provide that, to the extent that the reference tariff includes a return on/return of capital on relevant assets a rebate is payable.

Allocating a proportion of post-1995 capital expenditure to the coal reference tariff is inconsistent with the agreement under the AFDs. By allocating only a share of post-1995 capital expenditure to the coal reference tariff, there is a disconnect between the reference tariff and the amount contractually required by Queensland Rail to be rebated under AFDs. In simple terms, the coal tariff reflects 72.6 per cent of the capital costs of the relevant assets, but the rebate is set at 100 per cent of the capital costs of the relevant assets .

The implied assumption is that non-coal traffics are both able to, and in practice do, pay a tariff equal to the coal reference tariff, in terms of a return on and of the relevant capital amount. In actuality, this does not occur. The result will be that the shortfall is borne either by Queensland Rail, in the form of lower returns, or by a higher-than-otherwise TSC support.

An alternative approach would be to accept the premise that relevant assets relating to AFDs were specifically for the benefit of the coal sector, and the cost should be wholly included in the West Moreton System coal reference tariff. This would provide for a logical consistency between the cost base on which the reference tariff is determined, and the level of rebate payable under the relevant AFD.

5 Conclusion

5.1 Choosing an appropriate valuation approach

Australian regulators have overwhelmingly endorsed a DORC approach when valuing asset bases for pricing purposes. The approach is widely regarded as providing the most accurate estimate of the opportunity cost of the assets employed to deliver services, and therefore ensures efficient pricing signals with regard to future investment decisions.

The DORC approach has also consistently been applied by the QCA in the past for the valuation of asset bases for numerous regulated entities.

In our view the approach proposed by the QCA for deriving the reference tariff under Option 2 is not appropriate. Regulatory precedent overwhelmingly supports the application of the DORC methodology in order to value assets owned by a regulated business

The decision to treat pre-1995 assets as 'sunk' and in doing so assign these assets a zero value is also inconsistent with regulatory precedent. The QCA has previously stated that the exclusion of assets on the ground that they are sunk fails to provide incentives for the better management of assets or for future investment.

Further, the decision to draw a line in the sand at 1995 appears arbitrary. The QCA has suggested this is when significant traffics on the West Moreton System commenced, however as noted by B&H in its review, coal has been a regular traffic on the network since 1982. If 1995 has been chosen to align with Queensland Rail becoming a government owned corporation, we believe this is irrelevant. The primary issue to be determined is the present day replacement cost of a network configuration that provides the same level of service of the current network – this is most accurately done using a DORC approach.

5.2 Deriving a RAB

From our assessment of the QCA's estimated RAB for coal, we found that there were several issues with the QCA's approach.

First, the QCA's DORC estimate which was used for setting the reference tariff under the first option appears to be understated because it did not account for financing costs. Allowing a business to recover financing costs is standard regulatory practice and did not appear to be accounted for in B&H's valuation of the DORC, which was used by the QCA.
It is also important to note that B&H's estimate of asset lives should not bind the QCA's views on the asset lives of future assets. Asset lives should properly be based on a consideration of total useful economic life, and may be different compared with an asset's technical life.

The second issue is that we found the QCA has inappropriately reduced Queensland Rail's RAB to address the capacity constraints caused by the blackout period. We believe that a more appropriate treatment is to spread the same cost base over a comparatively lower volume base owing to the reduced number of train paths.

The final issue relates to the QCA's allocation of a coal specific RAB. We believe that allowing the allocator to vary is likely to yield more efficient outcomes and that there has been insufficient regard to the consistency with the AFD funded works.

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