



**NEW HOPE  
GROUP**

Queensland Rail's 2020 Draft Access  
Undertaking:

Initial Submission – Volume 1  
Overview and Reference Tariffs

17 October 2018

## **Volume 1 - Overview and Reference Tariff**

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## Part A – Introduction and overview

### 1 Introduction

Thank you for the opportunity to provide this submission on behalf of New Hope Group (**NHG**) in response to the Queensland Competition Authority's (**QCA**) request for submissions on Queensland Rail's (**QR**) proposed draft access undertaking to commence from 1 July 2020 (the **2020 DAU**).

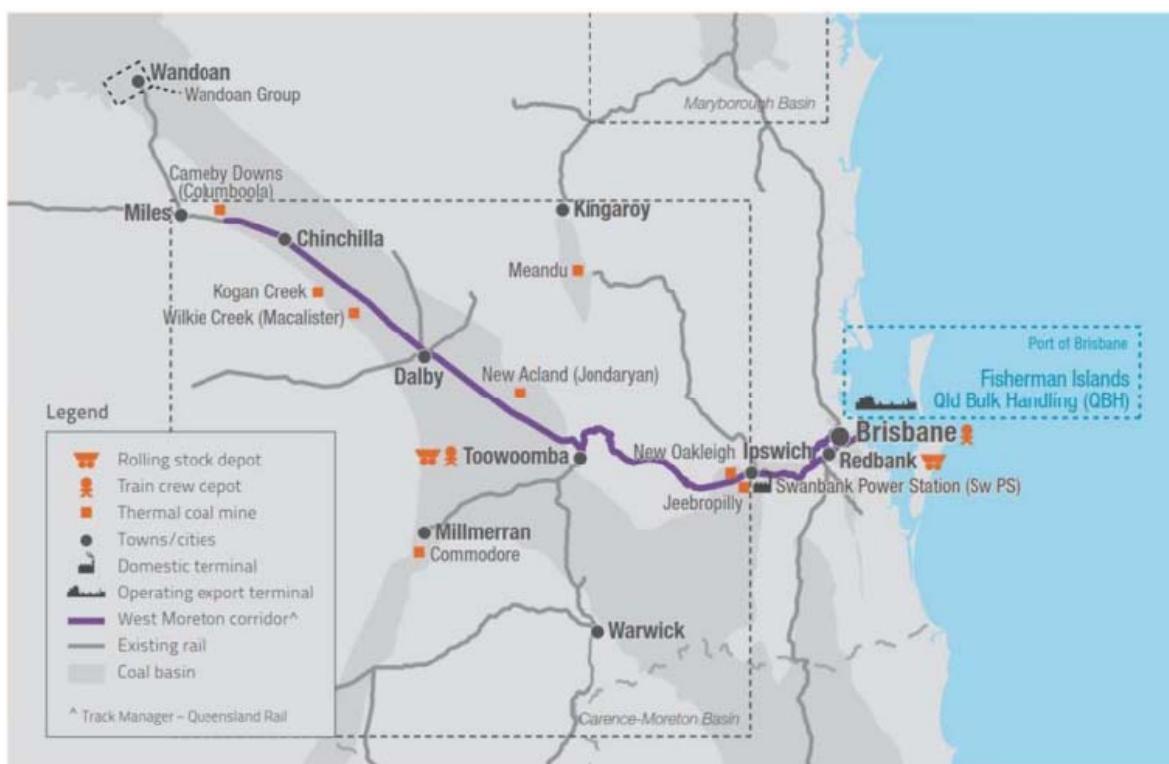
#### 1.1 New Hope

NHG is the largest coal producer in QR's West Moreton System, operating the Jeebropilly and New Acland coal mines.

NHG is progressing its planning for investment in the New Acland extension project and is also pursuing opportunities across its portfolio of coal projects within the Surat Basin, in Central Queensland and in the Hunter Valley.

NHG's principal interest in QR's network is therefore in respect of its existing and future mining operations which utilise the West Moreton system and the Metropolitan system to access the Queensland Bulk Handling (**QBH**) coal terminal at the Port of Brisbane (with those parts of the QR network shown in Figure 1 below).

**Figure 1: West Moreton / Metropolitan network and coal supply chain**



However, NHG projects in the Surat Basin could potentially also utilise other parts of QR's network.

Given NHG's portfolio of coal projects, a key consideration when making investment decisions and allocating capital for NHG is the existence of regulatory arrangements which promote efficient supply chain performance and provide reasonable and predictable charges for use of infrastructure.

## 1.2 The 2020 DAU

On 14 August 2018, QR submitted the 2020 DAU which would replace the current QR 2016 Access Undertaking (**AU1**).

On 22 August 2018, QR also submitted redacted versions of an Explanatory Document (the **QR Submission**) and a series of annexed reports.

NHG commends the more incremental approach to changes proposed by QR in respect of the wording of the 2020 DAU and related standard access agreement (**SAA**) given the rigorous and recent review conducted by the QCA in respect of AU1. That has allowed this submission to focus on only those issues of concern in the amendments, and NHG anticipates it will make the process for consideration of those documents more efficient. Volume 2 of this submission addresses those matters of concern.

However, the West Moreton reference tariffs proposed in connection with the 2020 DAU represent very substantial increases that will make the tariffs economically unviable for current and future users. Those increases are heavily reliant on fundamental changes proposed to:

- (a) QR's asset beta (from that which QR proposed and the QCA accepted as appropriate as recently as June 2016) and therefore the resulting weighted average cost of capital (**WACC**);
- (b) the regulatory asset base through high capital expenditure (at a time when QR is expressing concern about potentially falling volumes); and
- (c) the allocation of a high proportion of the West Moreton system network asset base (and fixed operating and maintenance costs) to West Moreton coal services.

In addition, proposed maintenance and operating costs appear excessive and have not been adequately justified as being prudent and efficient.

The bulk of the QR Submission and its attached reports seek to justify these very significant price rises, which NHG is strongly opposed to and considers are clearly inappropriate.

Consequently, these proposed price increases are the principal focus of NHG's submissions, such that they are addressed first in this Volume 1.

## 2 Structure of NHG Submission

The NHG submission addresses each of the components of the 2020 DAU as follows:

- (a) this Volume 1 provides:
  - (i) an overview of NHG's submissions;
  - (ii) comments on the regulatory framework applicable to the QCA's consideration of the 2020 DAU and the roles and powers of the QCA;
  - (iii) submissions in respect of the area of most concern to NHG, being the West Moreton reference tariff, including in respect of:
    - (A) allocation of network costs to coal services;
    - (B) the appropriate WACC and underlying WACC parameters, including asset beta and market risk premium;
    - (C) the appropriate capital expenditure allowance; and
    - (D) the appropriate operating and maintenance expenditure allowances.
- (b) Volume 2, provides comments on NHG's other concerns in relation to the proposed changes to the wording of:

- (i) the 2020 DAU; and
- (ii) the SAA.

In the course of those submissions, NHG also addresses each of the 11 aspects of the 2020 DAU on which stakeholder comments were particularly sought in the QCA “staff topics for stakeholder comments” document dated 21 September 2018 (the **QCA Notice**).

The table in Schedule 2 of this submission provides references to the parts of the submissions relevant to each QCA staff query.

### **3 Overview of NHG Submissions**

#### **3.1 Overview**

Having considered the 2020 DAU, QR Submission and QCA Notice, NHG considers that it is not appropriate for the QCA to approve the 2020 DAU under section 138(2) of the *Queensland Competition Authority Act 1997* (the **QCA Act**) for the reasons set out in this submission.

In particular, in respect of each of those matters, it fails to give sufficient weight to the following matters:

- (a) the object of Part 5 of the QCA Act, particularly regarding the efficient operation of and use of significant infrastructure;
- (b) the public interest;
- (c) the interests of persons who may seek access to the service;
- (d) the pricing principles in section 168A QCA Act, particularly in relation to the return on investment being commensurate with the regulatory and commercial risks involved; and
- (e) any other issues the QCA considers are relevant (which the QCA has previously recognised include regulatory certainty).

Accordingly, NHG requests that the QCA make a decision to refuse to approve QR's 2020 DAU and set out the ways in which the 2020 DAU should be amended, in accordance with section 140 of the QCA Act. This submission provides NHG's suggestions as to what it considers those amendments should address.

#### **3.2 Concerns in relation to reference tariffs**

As noted above, NHG's principal concerns with the 2020 DAU relate to the proposed West Moreton system reference tariffs.

In particular, the reference tariffs proposed are:

- (a) unsustainable and economically unviable for QR's coal customers on those systems; and
- (b) inappropriate based on any reasonable application of the building blocks pricing methodology given their reliance on:
  - (i) an inappropriate approach to allocation of the regulatory asset base for the West Moreton system costs to coal services;
  - (ii) an excessive asset beta that is artificially inflated due to reliance on a set of comparator businesses with materially different systematic risk profiles;
  - (iii) an excessive market risk premium that does not align with established regulatory precedent; and

- (iv) capital, operating and maintenance costs that appear to be well in excess of the prudent and efficient costs for the systems, particularly given the current demand outlook for coal services.

### **3.3 Concerns in relation to 2020 DAU wording**

NHG's principal concerns in respect of the wording of the 2020 DAU are:

- (a) the consequential tariff related changes (for the same reasons noted in relation to the reference tariffs above);
- (b) the removal of the Operating Requirements Manual and QCA oversight of its terms and how it is amended (given the importance that document has both to obtaining and utilising access rights);
- (c) the additional disruption and costs which will be caused by the introduction into the Network Management Principles of Ad Hoc Planned Possessions and Special Event variances;
- (d) the further weakening of renewal rights; and
- (e) the removal of Endorsed Variation Events for increases in volume and reviews of the QCA Levy (and the resulting bias toward over-recovery by QR).

NHG also considers that it is important that the reference train service description in the 2020 DAU be amended so as to contain full details of the reference train characteristics – by actually incorporating the Infrastructure Based Overload Limits – Western System coal trains as listed currently in section 2.7.2 of Module 2 of the Operational Route Manual which NHG understands replaces the load variation tables, a document that no longer exists. This amendment would provide access holders with certainty as to the operation of their access rights rather than the proposed drafting which leaves load variations subject to change at QR's discretion without appropriate regulatory oversight.

### **3.4 Concerns in relation to SAA wording**

NHG's principal concerns in respect of amendments proposed by QR in relation to the SAA are:

- (a) the removal of 'good faith' obligations;
- (b) amendment to clause 1.3 productivity and efficiency variations;
- (c) increase in required security; and
- (d) the amendment to the limitation on QR's liability for performance levels.

NHG accepts the other amendments to the SAA proposed by QR.

## **4 Regulatory framework and powers of the QCA**

NHG made extensive submissions to the QCA in the previous process in connection with the regulatory framework which applies to the QCA's consideration of a draft access undertaking.

In summary (and consistent with the QCA's findings and conclusions during the AU1 consideration process):

- (a) the QCA has a wide discretion when determining whether it is appropriate to approve an undertaking;
- (b) that discretion of the QCA is only limited by:
  - (i) the requirement to approve an undertaking which it considers 'appropriate' after it has 'had regard to' each of the factors set out in section 138(2) of the QCA Act;

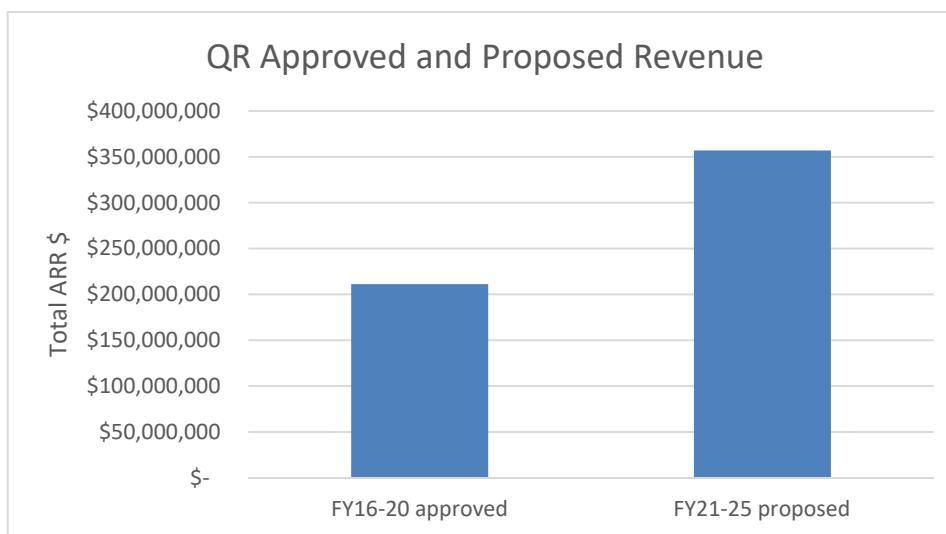
- (ii) the requirement to consult, invite and take into account submissions received (and otherwise provide natural justice more generally); and
  - (iii) the QCA not having a right to refuse to approve a draft access undertaking only because the QCA considers a 'minor and inconsequential' amendment should be made to a particular part of the undertaking;
- (c) no single factor listed in section 138(2) QCA Act is a 'cornerstone requirement', or a dominant or paramount factor that is required to be given greater weight;
  - (d) the QCA has the power to approve an undertaking which is inconsistent with a pricing principle in section 168A QCA Act if it would be appropriate to do so, having regard to all of the section 138(2) QCA Act factors; and
  - (e) the QCA is not bound to follow any particular regulatory precedent and, while the QCA may often follow such precedent, the QCA must not follow a precedent if to do so would result in the approval of an undertaking which is not appropriate having regard to the factors set out in section 138(2) QCA Act.

## Part B – West Moreton and Metropolitan System Reference Tariffs

QR is seeking substantial and unsustainable tariff increases, despite forecasting a strong increase in volumes and despite claiming that the majority of costs are fixed.

Compared to the volumes, revenues and tariffs submitted by QR for 2019/20 in the July 2018 Review Event application, we estimate that QR is seeking a 25% increase in tariffs (proposed tariff of \$22.39/’000gtk compared to 2019/20 tariff of \$17.91/’000gtk) despite an estimated 33% increase in volumes (see section 5.2), resulting in a 67% increase in revenue.

Our ability to assess QR’s revenue claims, and to provide comments, is constrained by excessive redactions throughout the QR submission, however we estimate that QR is proposing a \$146m increase on the revenue allowances determined for the AU1 period, which was \$211m<sup>1</sup>.



Even those high level figures should ring clear warning bells about what is proposed.

The proposed reference tariffs are both clearly:

- (a) unsustainable and economically unviable, in terms of impacts on QR’s customers; and
- (b) unjustified, based on analysis of the individual building blocks which contribute to the 67% increase in claimed revenue.

## 5 Coal volume forecasts

### 5.1 'High tonnage' scenario

QR has advised that the proposed West Moreton reference tariffs are based on a forecast of 9.1 mtpa, comprising 7mtpa from NHG’s New Acland Stage 3 project, with 2.1 mtpa being from Yancoal’s Cameby Downs project. We understand that these forecasts were developed by QR, taking into account a range of information, not limited to information provided by the miners.

[REDACTED]

At 9.1 mtpa, the West Moreton system tonnage forecast is an increase of approximately 48% on the forecast of 6.15mtpa which NHG estimates was adopted for AU1, and is a 33% increase on

<sup>1</sup> QCA Decision of June 2016, Appendix A, total ARR 2015/16 to 2019/20.

the gtks estimated by QR for 2019/20 in the July 2018 Review Event application (which was 2,275,710 '000 gtks).

NHG is deeply concerned that:

- (a) QR is seeking a tariff increase for West Moreton of 25% despite a 33% increase in volumes and despite QR's claims that its capital, operating and maintenance costs are largely fixed (see section 9 of this volume below); and
- (b) if a lower tonnage scenario eventuates, QR will seek to increase tariffs further, using a Review Event, DAAU or by applying an approved ceiling price. If we assume that QR's return on capital and net depreciation are fixed, and that maintenance and operating costs are 80% fixed, then NHG estimates that, at total tonnages of 7mpta (rather than 9.1mtpa), QR would be seeking tariffs which are approximately 55% higher than current approved West Moreton reference tariffs.

NHG has no objection to the adoption of the forecast of 9.1mtpa if revenue allowances are established at reasonable levels.

However, for the reasons discussed throughout section 5, we consider that QR's proposal to increase its revenues by ~67% is clearly inappropriate.

The impact of this revenue claim is partly masked by adopting a volume estimate which is at the upper end of a likely range, as will become clear if volume forecasts are not achieved and QR seeks to amend the undertaking through a subsequent Review Event or draft amending access undertaking (**DAAU**).

## 5.2 'Low tonnage' scenario

NHG understands that QR is proposing to engage in further consultation with users regarding the appropriate approach to tariffs in the 'low tonnage' scenario, which NHG assumes reflects 2.1 mtpa from Yancoal's Cameby Downs project and no production from NHG.

No such consultation has occurred with NHG as at the date on which this submission is made.

Consequently, NHG considers that it would be appropriate to provide stakeholders with a further opportunity to provide submissions on the appropriate pricing in a low tonnage scenario if that remains a perceived risk.

In regard to QR's lower tonnage scenario and proposed ceiling price of \$52.58/'000 gtk:

- (a) the ceiling price is presumably calculated in a manner that suffers from the same flaws in the WACC parameters as exist in relation to the high tonnage scenario (as discussed in the remainder of this volume of NHG's submission);
- (b) although QR states that it is not seeking approval for a ceiling price for the 'low tonnage' scenario at this stage, it appears that QR will seek to do this prior to the conclusion of the 2020 DAU process. NHG considers that the QCA should be extremely cautious about approving a ceiling price which would clearly be economically unviable (on QR's own admission) and presumably result in Yancoal's Cameby Downs mine also ceasing production (given past evidence of QR seeking prices that are unviable for producers); and
- (c) NHG considers that the information QR has presented regarding prudent and efficient costs relevant to a low volume scenario is not credible – with it being implausible that so much of QR's costs are fixed irrespective of volume and that it is not prudent to defer more capital expenditure where the demand outlook is at such a low level.

NHG notes that QR has raised the potential for seeking loss capitalisation or volume adjusted tariffs.

The more obvious solution would be optimisation of the asset base to a point at which the tariffs would be economically viable, otherwise the West Moreton system is likely to become completely economically stranded (with QR presumably being required to keep the system open for passenger and grain services – but at very significant cost to the government).

NHG's primary concern regarding the low tonnage scenario is that the QCA does not approve a pricing methodology which exacerbates the issue by increasing the costs of new entry – such that potential producers are dis-incentivised from bringing back new volume. In that regard, NHG is concerned that unlike other regulatory settings where loss capitalisation has been adopted, there is not a high degree of certainty of demand growing over time.

## 6 Asset base roll forward – DAU2 opening asset base

NHG generally accepts the standard roll-forward methodology for establishing the opening asset base, and relies on the QCA to verify that the amounts of capital expenditure, depreciation and indexation applied are consistent with the QCA's usual methodologies.

Specific issues which require consideration based on QR's submission include:

- (a) we suggest that an updated forecast of capital expenditure for 2013-14 to 2019-20 be adopted. While we understand that a true-up will ultimately apply to correct the effect of any variations, it is preferable to minimise later adjustments by using the most current estimates;
- (b) the quantum of the 2020 DAU capital indicator should be reviewed (see section 9.2);
- (c) QR's revised train path allocation for network costs is clearly inappropriate and should not be applied (see section 7);
- (d) asset optimisation needs to be considered, particularly if QR's revised train path allocation is accepted (see section 7); and
- (e) we do not understand the reference (Section 2.5.4 of the QR submission) to the “*addition of \$16 million of coal only sidings and balloon loop*”, as it is not clear to NHG which coal sidings and balloon loops this could be.

## 7 Allocations to coal services of common network asset base

QR is seeking to increase the allocation of the common network regulatory asset base (**RAB**) to coal services, based on an allocation of 97 weekly return train paths (**rtps**) out of a total of 113 rtps (85.8%) compared to 80 out of 113 rtps (70.8%) determined by the QCA as being appropriate for AU1 in its June 2016 Final Decision. This adjustment is proposed to be applied to all common network assets from 1995 onwards, and a similar increase is applied to the pre-1995 allocation (from a different base).

As discussed in Volume 2, QR is proposing consequential changes, including deletion of the previous acknowledgements of the existing path constraints that were reflected in the AU1 wording.

This issue was contentious and was debated at length throughout the AU1 process. The QCA's reasons for determining the 80 path limit were well documented in the QCA's Decision of June 2016, and the QCA should, for the reasons set out in that decision and in the interests of regulatory certainty, continue to apply the same methodology.

That is, NHG considers that it is appropriate that an allocation based on the previous Metropolitan path limit for West Moreton originating coal services (now 87 with the cessation of services to Ebenezer) should apply until QR signs contracts with coal customers which exceed this limit (at which time, the actual paths contracted should be the basis for the limit).

NHG's views are based on the following considerations:

### **7.1 No evidence that the constraint has been lifted**

QR acknowledged, in its December 2015 submission regarding the 2015 DAU, that an 87 path limit was "*contained in correspondence from DTMR*" (section 7.2 of QR's December 2015 submission). QR went on to claim, in the same submission, that this instruction from the Department of Transport and Main Roads (**DTMR**) was not legally binding. The question of whether the instruction was legally binding, or was not, had little relevance to NHG. QR's practice was to withhold access to this capacity from coal producers. Whether that was done based on a legally binding instruction from DTMR, or was simply a decision by QR to unlawfully prevent and hinder access (in breach of section 100(4) of the QCA Act, among other provisions) of its own initiative or due to an understanding Ministerial approval for any relevant access agreement would not be forthcoming, was a question of little practical relevance to access seekers.

QR now claims (section 2.5.6 of the QR Submission) that "*advice received from the Department of Transport and Main Roads prior to the QCA's 2016 AU1 final decision was that the [87 path restriction] did not apply*". No written confirmation of this advice was presented to NHG by QR at the time, or since.

QR goes on to state (also section 2.5.6 of the QR Submission) that QR "*has requested written confirmation from TMR that there is no 87 return coal train path restriction in the Metropolitan System*". NHG is not aware of any response having been received to this request.

Given the uncertainty of this situation, NHG wrote to the DTMR directly (a copy of which is enclosed as Schedule 1 to this volume 1) seeking to confirm that the 87 path restriction no longer applies. NHG has not received a reply as at the date of this submission, and can only conclude that the constraint is likely to still be in place (practically, if not legally).

Given that the constraint clearly applied in the past, and that no party has yet been successful in obtaining confirmation that the constraint no longer exists, it is not at all clear to NHG that this capacity is available for contracting by coal services and that an Access Agreement for coal services using this capacity would receive the necessary approvals from QR's shareholding Ministers.

Given the complete lack of evidence to support QR's claims about the constraints no longer applying, it is clearly inappropriate to make an allocation on the basis of an assumption that such constraints do not exist.

### **7.2 Impact of QR's historical practice**

Even if the removal of the constraints is confirmed (by each of QR, DTMR and the shareholding Ministers, as the entities which each have the ability to impose such constraints), that would not make it appropriate to change the approach to allocation of the RAB.

That follows because the removal of the contracting limit, now or in the future, will not automatically result in the capacity which was previously reserved for non-coal services being taken up by coal services. The capacity may be unutilised in the short or long term.

NHG does not accept that it is appropriate that coal services should immediately be required to pay for additional capacity, beyond the capacity which is required by those services, simply because the capacity is now (or becomes, in the future) theoretically available. The application of the constraint in the past is likely to have had a chilling effect on coal exploration and investment in the West Moreton region – and is certainly something that has impacted on the timing of coal development by NHG in that region. Those effects are likely to remain for many years after the time at which clear confirmation of the available capacity has been received.

### **7.3 Inequality of allocating all excess system capacity to coal**

The additional paths, if available, are not preserved for coal. They would not be preserved for any particular type of service and would thereby be equally available to both coal and non-coal services.

While it is correct in these circumstances that coal services will have an option to use this capacity, that option is shared with all other potential users.

### **7.4 Requirement to optimise**

Recovering the cost of this capacity from coal producers would be closely analogous to allowing an infrastructure owner to construct excess capacity, without contracts or other support from customers, and then to commence recovering costs.

If significant capacity is available which is not supported by current demand, then the QCA must consider the optimisation of assets.

As QCA noted in its June 2016 Decision on QR's 2015 DAU (Page 140), the B&H 2015 review observed that "*Queensland Rail now has many redundant assets but in the absence of closure, these assets continue to be inspected and maintained*", and "*a deep review of this network at forecast traffic levels could conclude that it contained many redundant assets and that an entirely different RAB is constructed and a new maintenance plan conceived*".

Schedule E clause 1.2 of AU1 (and the 2020 DAU) expressly acknowledges that the regulatory asset base can be reduced by the QCA where '*circumstances arise in the future where demand for Access has deteriorated to such an extent that regulated prices based on an unoptimised asset value would result in a further decline in demand for Access*'. That is exactly the situation that appears likely to occur here given the economically unviable pricing QR has derived from its proposed allocation methodology.

### **7.5 Appropriate allocation**

NHG considers that the most appropriate approach to the issue of spare capacity for the 2020 DAU period is to maintain the allocation percentages which were established for AU1, based on the paths which have historically been available for contracting by coal services.

This is appropriate regardless of whether or not DTMR now removes this limit, because it is not practical for coal producers to immediately take up this excess capacity.

Alternatively, if an allocation approach based on a revised limit is preferred, or there is a significant fall in coal volumes (such as QR's 'low tonnage' scenario) optimisation of the asset base would be appropriate.

### **7.6 Allocation of maintenance and operating costs**

For AU1, the QCA determined that fixed operating and maintenance costs should be allocated to coal services based on the proportion of paths available for contracting by coal services (that is, on a basis which is consistent with the allocation of the RAB). NHG accepts this approach.

QR's Submission does not explain the approach which QR has proposed in respect of the 2020 DAU, although QR has advised NHG that the approach has been to allocate maintenance and operating costs between coal and non-coal services as follows:

- (a) variable costs allocated based on forecast coal and non-coal gtrks; and
- (b) fixed costs allocated based on the 85.5 percent of paths which QR claims are available for contracting by coal services.

NHG accepts the methodology for allocation of variable costs and accepts that fixed costs should be allocated in the same manner as the West Moreton RAB. However, for the reasons discussed in section 7 regarding the allocation of the RAB, NHG is strongly opposed to QR's proposed percentage allocation of fixed costs.

We note that the maintenance costs shown in Figure 9 of QR's Submission (page 31) are around 15% lower than the amounts shown in Table 15 (page 29). Table 15 is labelled "West Moreton **coal** maintenance costs" (our emphasis), but appears to represent total network maintenance costs prior to allocation. Figure 10 provides a third set of maintenance numbers. For example, 2020-21 maintenance costs, in the high scenario, are \$28.483m in Table 15, \$23.7m in Figure 9 and \$26.6m in Figure 10. Figure 8 provides a further set of numbers, but may be based on a different (redacted) volume forecast. Given the confusing manner in which maintenance costs and possible allocation to coal services has been presented, NHG suggests the QCA should seek further clarity on that matter as part of scrutinising the appropriate allocation.

## **8 Weighted average cost of capital (WACC)**

### **8.1 Overview**

NHG generally accepts QR's proposal to adopt the QCA's position on market parameters, as set out in the draft decision on Aurizon Network's draft access undertaking (**UT5 Draft Decision**), subject to comments below regarding the QCA's approach to the market risk premium.

However QR's proposed asset beta (and therefore the proposed equity beta) materially overstates the degree of risk faced by QR in supplying services to coal customers.

In defining the relevant risk profile, QR has conflated risks associated with services provided to coal and non-coal customers. For example, as the QCA Notice alludes to, QR considers that the asset / equity beta should reflect the mix of coal and other freight services which use different parts of its network, and its exposure to competition in some parts of its business.

By contrast, NHG considers that, consistent with the QCA Act pricing principles, the rate of return that is allowed for in pricing of services for coal customers should reflect the degree of risk faced in supplying services to those customers. The pricing principles provide that the 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 in providing the service. To the extent that QR faces a different degree of risk in the supply of other services, that should not be reflected in returns recovered from coal customers.

QR's proposed asset beta is based on a sample of businesses which are likely to face very different risks to those faced by QR in the provision of services to coal customers. For example, the sample includes railway operators in China and Russia, toll road operators in Spain, airports in Mexico and port operators in Vietnam. There is no attempt by QR or its consultant (Frontier Economics) to reconcile the risk faced by QR in supplying services to coal customers with the risk profile of this very diverse sample. These problems with sample selection also affect QR's estimate of gearing.

NHG considers that the degree of risk faced by QR in providing services to coal customers in the West Moreton system is similar to that faced by Aurizon Network in servicing coal customers in central Queensland. In particular, we note that the regulatory framework that applies to QR is very similar to the framework for regulation of Aurizon Network, and includes similar risk protection mechanisms.

NHG therefore considers that the same approach to estimating the asset / equity beta and gearing, including the same comparator set, can be applied to QR (in regard to the service of

West Moreton coal customers) and Aurizon Network, consistent with the approach the QCA has previously accepted as appropriate in AU1.

## 8.2 Market parameters

NHG generally accepts QR's proposal to adopt the QCA's position on the market risk premium (**MRP**), the value of imputation credits (gamma), and the approach to estimating the risk-free rate and debt margin, as set out in the UT5 Draft Decision.

However we note that, if anything, the QCA's approach on some of these parameters is likely to be conservative and favourable to regulated service providers. In particular, the QCA's estimate of the MRP in the UT5 Draft Decision (7%) is materially higher than the AER's current estimate (6%).<sup>2</sup> This is because the QCA gives greater weight to certain estimation methods which have more limited empirical support, and which are therefore not favoured by the AER.

In particular, the QCA gives material weight to the 'Wright approach'. As the QCA recognises in the UT5 Draft Decision, this approach assumes that the risk-free rate and MRP are perfectly negatively correlated, or at least that the cost of equity is more stable over time than the MRP.<sup>3</sup> However these assumptions are not supported by empirical evidence. The QCA's analysis suggests that there is greater stability in the MRP than the real return on equity over time – a conclusion which does not support greater reliance on the Wright approach.<sup>4</sup>

NHG recognises that estimation of market parameters such as the MRP requires the exercise of regulatory judgement. However we consider that, in weighing up the available evidence, the QCA has given too much weight to methodologies which have significant limitations and which lack empirical support. NHG considers that, in light of current evidence, a more appropriate estimate for the MRP would be 6.0 per cent (consistent with the recent AER draft rate of return guideline) or 6.5 per cent.

## 8.3 Averaging period for time-variant parameters

The QR Submission is unclear on when time-variant parameters are to be estimated. It is simply noted that "*these numbers will vary between now and when they are set at the DAU2 approval time, likely to be in early 2020*".<sup>5</sup>

Consistent with previous practice, and to avoid gaming, NHG submits that QR should be required to nominate an averaging period in advance of it occurring (or, in the absence of a QR nomination, this period should be set by the QCA).

## 8.4 Asset / equity beta and gearing

QR proposes an asset beta that is almost double what was determined by the QCA for Aurizon Network in the UT5 Draft Decision. This is said to be justified on the basis that QR's systematic risks are very different to those faced by Aurizon Network.<sup>6</sup>

QR's proposed asset beta and gearing is based on calculations by Frontier Economics, using a diverse sample of railroad, port, airport and toll road businesses operating in a range of different countries. Based on a weighting of asset beta estimates for businesses in each sector, Frontier

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<sup>2</sup> AER draft rate of return guidelines, July 2018.

<sup>3</sup> UT5 Draft Decision, p 491.

<sup>4</sup> UT5 Draft Decision, p 493.

<sup>5</sup> QR explanatory document, p 17.

<sup>6</sup> QR explanatory document, p 18.

calculates an asset beta of 0.77. Using the same sample and weights, Frontier calculates a gearing ratio of 28%.

NHG considers that there are two major deficiencies in the analysis conducted by QR and Frontier:

- (a) first, it is premised on a misconception of the relevant risk profile; and
- (b) second, there is no attempt to analyse the risk profile of businesses in the data sample, nor is there any attempt to reconcile the risk profile of this diverse sample with the degree of risk faced by QR in providing services to coal customers.

Each of these issues is discussed below.

NHG considers that the degree of risk faced by QR in providing services to coal customers in the West Moreton system is similar to that faced by Aurizon Network in servicing coal customers in the central Queensland coal region. In particular, we note that the regulatory framework that applies to QR is very similar to the framework for regulation of Aurizon Network. NHG therefore considers that the same approach to estimating the asset / equity beta and gearing, including the same comparator set, can be applied to QR and Aurizon Network.

## **8.5 The relevant risk profile**

The pricing principles in section 168A of the QCA Act provide that the 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 in providing the service.<sup>7</sup>

In this case, the relevant service for which prices (reference tariffs) are to be determined is a coal train service operating in the West Moreton and Metropolitan systems.<sup>8</sup> The rate of return must reflect the degree of risk faced in providing that service.

However QR and Frontier Economics define the risk profile in a way that conflates risks associated with services provided to all of QR's coal and non-coal customers. For example, QR and Frontier Economics state that:

- (a) relevant comparators will include businesses that are exposed to competition in some or all components of what they do. While this may be true for some services provided to non-coal customers in some parts of the QR network, it is certainly not true of services provided to coal customers in the West Moreton and Metropolitan systems where road transport is clearly not competitive for a range of reasons (including pure economics of transportation, that transport by rail is a condition of unloading at QBH's terminal and safety, community and environmental reasons); and
- (b) relevant comparator business include those used to transport a mix of bulk freight and other kinds of freight.

NHG does not consider it appropriate to define the risk profile in this conglomerate or 'whole of QR' way. For the purposes of setting charges for services provided to coal customers, the rate of return should reflect the degree of risk faced in providing those services, consistent with the QCA Act pricing principles that the return on investment should be commensurate with the risk involved in pricing the service.

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<sup>7</sup> QCA Act s 168A(a).

<sup>8</sup> The Reference Train Service for the Reference Tariff is one that only carries bulk coal and operates either solely on the Metropolitan System or on both the West Moreton System and the Metropolitan System (QR DAU, Schedule D, cl 2.1).

Another important aspect to the QR / Frontier Economics risk profile definition is its focus on the physical characteristics of the services provided. The relevant risk characteristics identified by Frontier Economics and QR include that QR is a transport infrastructure operator and that its network is used to transport a mix of bulk freight and other kinds of freight.<sup>9</sup>

While promoting the importance of physical characteristics, QR and Frontier appear to ignore the form of regulation (or lack of regulation) applied to each business in its comparator set. The form of regulation is not identified as a relevant risk characteristic, and there is no analysis of the extent to which the form of regulation applied to QR might affect its risk profile.

As has been noted by the QCA and Incenta, the form of regulation is likely to have a much greater bearing on risk than the type of service that is provided. It is therefore necessary to “look through” the physical characteristics of a service provider’s operations to assess the economic fundamentals underpinning cash flows.<sup>10</sup> As has been noted by the QCA, the form of regulation will have an important bearing on the degree of risk borne by a service provider.

Key features of the regulatory and commercial environment which impact on QR’s risk profile include:

- (a) take or pay arrangements covering 100 per cent of access charges for contracted tonnes, providing QR with significant protection from volume risk (QR only bears volume risk to the extent that forecast tonnes exceed contracted tonnes);
- (b) a regulatory framework which provides protection from cost risk, by permitting changes to access arrangements (including reference tariffs) to address changes in circumstances (with the DAAU process in fact providing QR with complete freedom to seek amendments for any unanticipated event); and
- (c) limitations on the liability of the service provider where there are capacity shortfalls and/or a failure to meet performance standards.

QR and Frontier Economics do not address these important factors in their analysis of the relevant risk profile.

## **8.6 Comparator set**

The comparator set used by Frontier Economics is a very diverse set of businesses from a range of industries and countries. For example, it includes.<sup>11</sup>

- (a) railway operators in China, Russia, India, Canada, Australia and the US (notably, Aurizon Holdings is included in this set, notwithstanding QR’s claim that it faces very different risks to Aurizon Network);
- (b) toll road operators in Spain, Italy, France and Australia;
- (c) airports in a range of countries, including Serbia, Mexico and Turkey; and
- (d) port operators in a similarly wide range of countries, including China, India, Chile and Vietnam.

Frontier Economics also refers to pipelines and regulated energy and water businesses as being potentially comparable, but gives these businesses no weight in its calculations.

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<sup>9</sup> QR explanatory document, p 18; Frontier Economics Report, p 3.

<sup>10</sup> UT5 Draft Decision, pp 106 – 107.

<sup>11</sup> Frontier Economics Report Appendix.

There does not appear to be any attempt by Frontier Economics / QR to analyse the risk profile of the businesses in its sample. It appears to be assumed that, because they operate in a particular sector of the economy in their respective countries, they will face a similar risk profile to QR. Importantly, there is no analysis of the form of regulation or other factors affecting the risk profile of these businesses.

NHG has not sought to analyse the risk profile of all businesses in the very diverse Frontier Economics sample. However it is worth noting just a few examples, to illustrate how different the risks faced by these businesses are, compared to the risks faced by QR:

**(a) Russian railway operator – Globaltrans**

The principal activity of Globaltrans is the provision of railway transportation services (above rail services) using its own rolling stock and some leased rolling stock.<sup>12</sup>

Globaltrans notes that one of the key ‘strategic risks’ facing its operations is its dependence on demand for transportation of key commodities in Russia and Eastern Europe. The most recent Globaltrans annual report states:<sup>13</sup>

*The Group operates mainly in Russia, other emerging markets and Estonia. Emerging markets, such as Russia, Kazakhstan and Ukraine, are subject to greater risks than more developed markets, including significant economic, political, social, legal and legislative uncertainties. Moreover, the Group’s business depends on the demand in the Russian freight rail transportation market, which in turn depends on certain key commodity sectors and, accordingly, on economic conditions in Russia, Europe and elsewhere. A decrease in production and demand for key commodities in Russia, or in adjacent countries where the commodities of the Group’s key customers are shipped by rail, as a result of a technological shift, economic downturn, political crisis or other event in Russia or another relevant country, negatively impacts the Group’s business and growth prospects.*

It is not clear whether Globaltrans has any regulatory or commercial protection from demand / volume risk, such as take or pay arrangements. However these comments suggest that it has little or no such protection.

Globaltrans also identifies significant exposure to cost and operational risk, including the prospect of input cost inflation that it will not be able to pass on to customers. The annual report notes:<sup>14</sup>

*The operational risks faced by the Group that could influence the Group’s operational efficiency include the physical state of the Russian, Ukrainian, CIS and Baltic countries railway infrastructure which may negatively impact the condition of the Group’s rolling stock and the performance of the Group; the impact of inflation in Russia on the Group’s costs with limited opportunities to increase tariffs to customers; the competition for personnel with relevant expertise and experience in Russia and the impact on the Group’s ability to continue to attract, retain and motivate key employees and qualified personnel; reliance on RZD [Russian Railways] for locomotive traction and infrastructure usage and the impact of this on the quality of the Group’s freight transportation services and therefore customer satisfaction; IT availability and continuity*

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<sup>12</sup> Globaltrans Investment PLC, Consolidated Management report and consolidated financial statements for the year ended 31 December 2017.

<sup>13</sup> Globaltrans Investment PLC, Consolidated Management report and consolidated financial statements for the year ended 31 December 2017, p 5.

<sup>14</sup> Globaltrans Investment PLC, Consolidated Management report and consolidated financial statements for the year ended 31 December 2017, p 5.

*considerations due to reliance on specialised rail transport and logistics software for ensuring efficient and effective logistics, dispatching and rolling stock tracking services; and risks of terrorist attacks, natural disasters or other catastrophic events beyond the Group's control.*

Again, it would appear from these comments that Globaltrans has limited protection from cost risk as part of its commercial and/or regulatory framework.

**(b) Toll road operators in Spain, Italy, France and Australia.**

Toll road operators are generally highly exposed to volume risk and (depending on the terms of construction / maintenance contracts) cost risk. Toll roads also typically compete with toll-free roads. As a result, many toll road operators have experienced severe financial difficulties, particularly during times of depressed economic activity.

In Spain, numerous toll roads have been bankrupted as a result of low traffic during a prolonged economic downturn. In many cases, Spanish toll roads compete with essentially parallel toll-free roads. The Spanish Government has recently announced that it will take over seven bankrupt toll roads.<sup>15</sup>

In Australia, toll road bankruptcies have included Clem7, the Lane Cove Tunnel, the Cross City Tunnel and BrisConnections (former operator of Brisbane's AirportLinkM7 tunnel).

**(c) Hong Kong-based port operator – China Merchants Port Holdings (CMPort)**

CMPort operates a number of ports in China, as well as elsewhere in Asia, Africa, the Middle East, Europe and the United States. CMPort describe their principal activities as "ports operation, bonded logistics operation and property investment" (CMPort reports approximately HK\$8 billion worth of property investments).<sup>16</sup>

The CMPort annual report explains that the financial performance of the business is heavily influenced by movements in the global economy and trade activity, as well as political and other forces affecting global trade flows.<sup>17</sup>

**(d) Mexican airport operator – Grupo Aeroportuario del Pacifico SAB de CV.**

Grupo Aeroportuario del Pacifico operates thirteen airports in Central America. Eighty-five per cent of the group's revenue comes from five large airports – Gaudalajara, Montego Bay, Los Cabos, Tijuana and Puerto Vallarta – with the remainder coming from eight smaller airports across Mexico.

The group's most recent annual report notes a number of risk factors affecting its revenues, including:<sup>18</sup>

- (i) its revenues are highly dependent on levels of passenger and cargo traffic volumes and air traffic, which depend in part on factors beyond its control – this includes economic conditions in Mexico, Jamaica, the United States, Canada and Europe, the political situation in Mexico, Jamaica and elsewhere in the world, public health crises, the attractiveness of the destinations that its airports serve relative to those of other competing airports, fluctuations in petroleum prices,

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<sup>15</sup> 'Spain to take over several failed motorways', Reuters, 17 February 2018.

<sup>16</sup> China Merchants Port Holdings Annual Report 2017, pp 154, 176.

<sup>17</sup> China Merchants Port Holdings Annual Report 2017, pp 7-11.

<sup>18</sup> Grupo Aeroportuario del Pacifico, S.A.B. de C.V., Annual Report pursuant to section 13 or 15(D) of the Securities Exchange Act of 1934 for the fiscal year ended December 31, 2017 (Form 20-F), p 5 ff.

- disruptions of global debt markets and changes in regulatory policies applicable to the aviation industry;
- (ii) the business is particularly sensitive to economic conditions and other developments in the United States, including the state of the US economy, immigration policy and trade policy;
- (iii) changes in US immigration and border policy in particular could adversely affect passenger traffic to and from Mexico;
- (iv) levels of passenger and cargo traffic volumes and air traffic at the group's airports are highly sensitive to the impact on airlines of international petroleum prices and access to credit; and
- (v) competition from other tourist destinations could adversely affect the business. The group's annual report notes that the attractiveness of tourist destinations served by its airports may be affected by a range of factors outside its control, including travellers' perceptions of the safety and political and social stability of Mexico and Jamaica, particularly as a result of the uncertainty and safety concerns resulting from the Mexican government's ongoing effort against drug cartels.

**(e) Conclusions on QR's proposed comparator businesses**

As is evident even from the selection of evidence above, it is difficult to see anything in common between these businesses and QR, in terms of their exposure to systematic risk. The only common feature between these businesses and QR is that they all operate in the broad 'transport' sector, somewhere in the world.

Yet, these businesses are afforded significant weight in Frontier's estimation of the asset / equity beta and gearing for QR. In particular, railway operators (including Globaltrans) are given 40% weight in the Frontier Economics sample, while port operators (including CMPort) are given 30% weight.

NHG considers it is plainly evident that the QCA can have no confidence that this comparator set will be representative of the risks faced by QR in supplying services to coal customers.

**8.7 NHG's proposed approach to the comparator set and estimation of beta / gearing**

NHG supports the QCA's approach to assessing a service provider's risk profile and identifying relevant comparators for the purposes of beta estimation.

In particular, we agree that any beta analysis should "look through" the physical characteristics of a service provider's operations to assess the economic fundamentals underpinning cash flows.<sup>19</sup> We also agree that the risk profile of a service provider is closely linked to the design of the regulatory framework.

The QCA has previously noted that QR's West Moreton network and Aurizon Network share similarities in terms of the exposure to systematic risk, namely that they have:<sup>20</sup>

- (a) operations in the Queensland coal chain;
- (b) cost-based regulation that is applied to coal traffic operations;
- (c) revenue protection from take or pay contract provisions;

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<sup>19</sup> Draft Decision, pp 106 – 107.

<sup>20</sup> QCA, Draft Decision: Queensland Rail's 2015 Draft Access Undertaking, October 2015, p 68.

- (d) cost pass through provisions within access agreements; and
- (e) similar institutional arrangements, in that they are both located in the same state and regulated by the same regulator.

NHG agrees with this assessment, and for this reason we consider that the same set of comparator businesses may be used to estimate the asset and equity beta for QR and Aurizon Network.

A comparison of the risk protection mechanisms available to QR and Aurizon Network is set out in Schedule 3. This shows that, in many respects, QR and Aurizon Network are protected from systematic risk to a similar degree.

NHG acknowledges that QR's customer profile is different to that in some parts of Aurizon Network's central Queensland coal network (**CQCN**). In parts of the CQCN, there is a larger number of customers. However there are parts of the CQCN which have a similar number of customers to the West Moreton system. For example, the Moura system is, and, until relatively recently, the Newlands system was, dependent on one or two main customers. Indeed, Aurizon Network argues that a key factor affecting its risk profile is that it has "a relatively small number of customers, which are all exposed to a single asset class".<sup>21</sup> Aurizon Network also argues that, due to 'fragmentation' of its RAB by system, there is increased stranding risk in those systems dependent on one or two customers.<sup>22</sup>

Likewise, parts of the ARTC Hunter Valley Network (specifically Pricing Zone 3) have only two customers.

It is also not uncommon for regulated energy and water businesses (the comparator businesses used by the QCA for estimating Aurizon Network's asset beta) to have a small number of large customers. For example, this is often the case for gas transmission pipelines servicing large industrial customers and/or power stations.<sup>23</sup> It is also the case for some water businesses which are heavily dependent on large industrial customers, such as the Gladstone Area Water Board (**GAWB**).

NHG does not consider that less diversity in QR's customer base compared to parts of the CQCN necessarily means that it is more exposed to systematic and non-diversifiable risk. Simply having a smaller number of large customers will not mean that a business is more exposed to market risk factors, if demand from those customers is not tied to fluctuations in the general economy. This is reflected in the fact that:

- (a) the degree of systematic risk faced by Aurizon Network, and its asset and equity beta, are not assessed differently for those parts of its network with fewer customers;
- (b) ARTC's systematic risk exposure is not considered to be materially different in Pricing Zone 3, where it is dependent on just two customers;
- (c) in setting equity beta values for gas distribution and transmission businesses, the AER does not distinguish between those with few customers, and those with many; and
- (d) in the case of the GAWB, the QCA has considered the potential for different asset betas to be applied to GAWB's large industrial and urban customers, but has decided against

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<sup>21</sup> Aurizon Network Submission: 2017 Draft Access Undertaking, 30 November 2016, p 2.

<sup>22</sup> Aurizon Network Submission: 2017 Draft Access Undertaking, 30 November 2016, p 2.

<sup>23</sup> For example, the Carpentaria Gas Pipeline was constructed principally to transport gas to two large power stations in Mt Isa.

doing so, noting that industrial demand (from a small number of large industrial customers) is in fact slightly less volatile than demand from the urban customer base.<sup>24</sup>

The QCA's consultant, Incenta, explains that the number of customers is not the critical issue – rather, what is important is the sensitivity of earnings to the economic cycle.<sup>25</sup> In responding to Aurizon Network's argument regarding the relatively small number of customers that it serves, Incenta explains.<sup>26</sup>

*While Aurizon Network has a relatively small number of customers compared with energy or water distribution businesses, like regulated energy and water businesses, Aurizon Network has a position of market power with a captured customer base. Furthermore, the miners themselves have relatively strong positions on the international export coal cost curve. Ultimately, what is important for beta is resilience of revenue / earnings through the economic cycle. This can occur in energy and water businesses not because of the number of customers, but because the demand has a significant component of residential consumption, which has a low income elasticity of demand. As we found in our first principles analysis in chapter 3, Aurizon Network's absence of sensitivity to the economic cycle is due to its market power, captured and resilient customer base, long term contracting, and cost-based regulatory framework.*

To the extent that having fewer customers might be seen to increase the risk of asset stranding, this may not reflect greater exposure to systematic risk. Such risks may be diversifiable and therefore should not be reflected in the cost of capital. It is generally recognised by regulators that where the risk of asset redundancy or stranding is non-systematic and diversifiable, this should not be factored into the asset / equity beta.<sup>27</sup> For example the Economic Regulation Authority notes, in relation to gas pipelines serving large customers exposed to commodity price fluctuations.<sup>28</sup>

*Downstream demand risk has the potential to be outside the control of the firm, and therefore exogenous and systematic. Indeed, there will be a part of the volatility in revenue which does reflect systematic demand risk faced by all firms in the economy. Such demand risk will be reflected in the variability of returns on equity, which is captured through models such as the CAPM.*

*However, some proportion of the demand risk may be diversifiable. An example might be a gas transmission pipeline, which is heavily exposed to a small set of commodity prices. The risk faced by this pipeline is for a significant demand decline if commodity prices fall, and downstream customers fail. However, this risk may be diversifiable to an extent by the investor. To continue the example, a non-systematic downturn in commodity prices, say reflecting a large increase in supply capacity somewhere in the world, may be offset by higher returns in other sectors of the economy, as businesses that use the commodity as an input experience lower cost structures.*

*In general, to the extent that revenue risk is diversifiable, it should not be compensated in the rate of return.*

In the case of QR, the key risk that it currently faces relates to pending approvals for expansion and mine life extension of NHG's New Acland mine. This is clearly not reflecting an exposure to

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<sup>24</sup> QCA, *Final Report: Gladstone Area Water Board: Investigation of Pricing Practices*, September 2002, pp 88-89.

<sup>25</sup> Incenta, *Aurizon Network's WACC for the 2017 DAU*, December 2017, p 59.

<sup>26</sup> Incenta, *Aurizon Network's WACC for the 2017 DAU*, December 2017, p 59.

<sup>27</sup> For example: IPART, *Final Decision: Revised Access Arrangement for Country Energy Gas Network*, November 2005, p 70.

<sup>28</sup> Economic Regulation Authority, *Explanatory Statement for the Rate of Return Guidelines*, December 2013, p 38.

systematic risk. Rather, this is a diversifiable risk relating to a specific regulatory approval process.

In any event, the risk protection mechanisms available to QR under its regulatory framework are essentially identical to those available to Aurizon Network, meaning that the degree of risk ultimately borne by QR and Aurizon Network (after regulatory protections are accounted for) is likely to be similar. As the QCA has previously noted, the regulatory framework which applies to both QR and Aurizon Network provides sufficient flexibility to address risks associated with individual customers and/or assets on a case-by-case basis.<sup>29</sup> If such risks do materialise then QR (like Aurizon Network) has the ability to manage this risk within the regulatory framework. In particular, QR (like Aurizon Network) is able to submit changes to reference tariffs through the “review event” mechanism, and/or broader changes to the regulatory compact as part of a DAAU / DAU submission.<sup>30</sup>

Therefore, while there may be some differences between QR and Aurizon Network, NHG considers that Aurizon Network continues to represent the closest comparator for QR, in terms of its exposure to systematic risk.

Extensive analysis has been undertaken by the QCA and Incinta in relation to the risks borne by regulated businesses under the QCA Act framework – particularly Aurizon Network. The QCA and Incinta have also considered the set of appropriate comparator businesses that should be used in estimating risk parameters. Based on a comprehensive analysis that applies both theory and empirical evidence, Incinta concludes that regulated energy and water businesses are the best available comparators to estimate Aurizon Network’s systematic risk.<sup>31</sup> NHG agrees with this conclusion, and we consider that it applies equally to QR, given the similarities between QR and Aurizon Network, as outlined above. We consider that regulated energy and water businesses are most comparable to QR and Aurizon Network, largely because the regulatory frameworks that apply to them have similar in-built risk protection mechanisms.

## 8.8 Conclusion

NHG generally accepts an approach to market parameters (the MRP, gamma, risk-free rate and debt margin) that is consistent with the UT5 Draft Decision, although we consider the approach taken by the QCA to the MRP in the UT5 Draft Decision to be highly favourable to regulated businesses.

For reasons set out above, we also consider that the approach to defining the relevant risk profile and calculating the asset / equity beta and gearing should be the same as in the UT5 Draft Decision. We consider that the degree of risk faced by QR in supplying services to coal customers in the West Moreton and Metropolitan systems is likely to be similar to that faced by Aurizon Network in serving coal customers in central Queensland. The risk protection mechanisms available to QR under its regulatory framework are essentially identical to those available to Aurizon Network, meaning that the degree of risk ultimately borne by QR and Aurizon Network (after regulatory protections are accounted for) is likely to be similar.

NHG considers that the analysis undertaken by the QCA in the UT5 Draft Decision (and the June 2016 decision in respect of AU1) is thorough and robust. We therefore support application of the approach set out in the UT5 Draft Decision to QR, with appropriate updates for time-variant parameters.

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<sup>29</sup> UT5 Draft Decision, p 115.

<sup>30</sup> UT5 Draft Decision, p 115.

<sup>31</sup> Incinta, Aurizon Network’s WACC for the 2017 DAU: Report for the Queensland Competition Authority, December, 2017, p 10.

## **9 Capex, depreciation, maintenance and operating costs**

### **9.1 Overview of concerns**

NHG has a number of concerns with QR's proposal, which apply to the proposed capital expenditure program (discussed further in section 9.2), the proposed maintenance cost allowances (discussed further in section 9.4) and proposed operating costs (discussed further in section 9.5).

These concerns include:

#### **(a) Lack of information**

Unfortunately, the extensive redactions in the QR Submission mean that QR has not fully disclosed cost elements or tonnage scenarios in a manner which would allow NHG (or other stakeholders) to provide meaningful comments regarding the prudence of the proposed costs.

Stakeholders will therefore be heavily reliant on the QCA's assessment of prudence. At this stage, NHG considers there is a real question as to whether, given the extensive redactions, stakeholders have been provided with procedural fairness in respect of QR's various cost proposals.

#### **(b) Lack of cost focus, particularly in lower tonnage scenarios**

The summarised dollar amounts indicate that QR has not adequately considered the need to reduce capital, maintenance and operational costs in line with reduced tonnage scenarios on the West Moreton System. One would have expected that prudence, in the context of QR having concerns about a low tonnage scenario, would have resulted in some capital costs being deferred and more maintenance and operating costs being converted into variable costs to allow QR to better manage demand volatility.

There is also no evidence of productivity improvements for either tonnage scenario.

#### **(c) Limited meaningful review**

The GHD review of proposed capital and maintenance costs appears unduly narrow in its scope (with limited projects considered and numerous assumptions and limitations made) which raise serious questions about the utility of its findings, and the extent to which it provides any evidentiary value about the prudence or efficiency of QR's proposed costs.

#### **(d) Excessive costs**

Particular cost items are excessive – principally operating costs for the train control function and all other add on overheads (which are multiple times higher than normal benchmarks).

QR has taken a view that a high proportion of cost items are fixed. For example, QR claims that in a low tonnage scenario in which only 23% of the forecast volumes remain:

- Only three of the 25 capital projects can be avoided;
- Maintenance costs reduce by only \$39.1m, with \$101.8m of maintenance expenditure still required; and
- It is not possible to reduce operating costs at all.

A comparison of QR's total capital, operating and maintenance costs in the high and low tonnage scenarios is shown below:

**Figure 4: Comparison of QR Proposed Costs in Different Tonnage Scenarios**

	High	Low	Fixed portion	% Fixed (of high case)
Capex \$m	159.384	144.495	140	88%
Maintenance \$m	140.921	101.825	90	64%
Opex \$m	48.717	48.717	48.717	100%
<b>Total \$m</b>	<b>349.022</b>	<b>295.037</b>	<b>270.717</b>	<b>80%</b>
Tonnes	9.1mt	2.1mt		

It is difficult to reconcile this level of fixed costs with QR's statement (Section 2.4.3 of the QR Submission that “*very different capital, maintenance and operational expenditure profiles will be required under these differing scenarios*”). It is also difficult to understand why the proposed maintenance and operating costs per tonne have not decreased substantially between AU1 and AU2, as would be expected if costs are largely fixed and volumes have increased by 48%.

Given lower volumes in the low tonnage scenario, NHG would have anticipated there being greater opportunities to have more productive on-track maintenance time. We would have expected to have observed maintenance cost reductions associated with better on-track maintenance time and reduced volumes.

As some of the key examples from the GHD report show, the review only considered five out of 25 capital items and a major part of maintenance costs was not considered. For maintenance costs, GHD limited its consideration of labour costs to rates under the Enterprise Agreement as opposed to quantum of labour cost. Given labour is a significant proportion of maintenance costs, this is not a meaningful peer review. GHD also acknowledge a limited sample of sites between Toowoomba and Rosewood.

## 9.2 Capital Expenditure

### (a) NHG comments

Section 2.7 of the QR Submission and 1.3 of the QR Report in Attachment 3 has significant information redacted in respect of its proposed capital expenditure (e.g. Tables 10, 11, 12 in the QR Submission and only cost categories in Table 3 of Attachment 3), such that stakeholders have been provided with no visibility of the costs for individual projects, and rather just aggregate costs. This makes it practically impossible to provide an informed opinion on the efficiency of the spend at an individual project level.

NHG considers that, particularly given the very significant capital expenditure and its implications for the West Moreton and Metropolitan system tariffs, stakeholders should be provided with a greater opportunity to consider the prudence and efficiency at a more granular project level.

The following commentary is therefore limited to issues that are evident from the aggregate figures provided to date, and the QCA should of course apply scrutiny to individual material projects.

Figure 2 of the QR Report in Attachment 3 demonstrates a material and sustained uplift in proposed capital expenditure from that which occurred in previous periods – being 13% higher than the allowance included for AU1. That of itself should give rise to scrutiny about why capital requirements are rising so steeply.

Section 2.7.2 of the QR Submission outlines proposed capital expenditure by year for the two tonnage scenarios (\$144.495 million for the low tonnage scenario and \$159.384 million for the high tonnage scenario in \$2020/21). As previously noted, QR has advised that the high tonnage scenario is 9.1mtpa, and if it is assumed that the low tonnage scenario is based on only Cameby Downs remaining in production, then that scenario is based on railings of 2.1mtpa.

NHG submits that it is highly unlikely to be prudent to incur only 9.3% less capital expenditure in a scenario where the volumes would drop by nearly 77%. That level of capital expenditure is clearly not prudent in a low tonnage scenario.

Even the potential for a low tonnage scenario to eventuate would surely give rise to consideration of what capital would be more prudent to defer until certainty of volume was restored.

However, it appears to NHG that QR's approach has been to design all capital expenditure on the assumption of current volumes, and to only consider which of those are entirely variable to volume. NHG does not consider that could be a prudent approach given the clear potential for a material change in volumes.

For example, footnote 15 on page 22 of the QR Submission quotes: '*The current West Moreton Network Asset Management Plan is based on continuation of the current tonnes....*'. Section 2.7.3 on page 22 of the QR Submission then indicates that '*the proposed capital expenditure for the DAU2 period has been developed in the context of the 2018-19 West Moreton System Asset Management Plan...*'.

Section 2.7.4 (and the QR Report at Attachment 3) of the QR Submission proposes that only three of the 25 proposed projects are tonnage related. This suggests QR would still seek to undertake numerous major capital expenditure projects even if only one train per week was operating. A prudent and efficient infrastructure manager would surely consider other options to reduce risk for example, reduce speed on certain bridges or improve wheel impact detection to reduce impacts and defer expenditure.

In particular, the timber bridge replacement program is the largest capital project across the 2020 DAU period and claimed to be justified partly on the basis of decreasing high maintenance costs due to the existing gross tonnages on the West Moreton system. NHG questions whether that is an example where, in a context of some uncertainty as to volume, capital should not be planned so as to reduce maintenance costs assuming constant tonnage (as Figure 1 in Attachment 3 suggests). Rather, capital should be deferred other than for those bridge replacements which are truly critical for safety reasons, given the potential prospect of lower tonnages.

Figure 7 in QR's Submission shows a significant step-up in expenditure of 13 per cent in real terms compared to AU1. This also suggests QR is not seeking productivity improvements or critically assessing its existing list of projects.

Section 2.7.6 outlines that five of the 25 projects were subject to peer review by their consultant, GHD. GHD is quoted ...*and that labour costs are in keeping with Queensland Rail's relevant wage-related agreements with staff members*. This is not convincing of labour efficiency. In addition, there is no discussion of quantum of labour, only the labour rate relative to Queensland Rail's enterprise agreement.

**(b) GHD peer review: Capital Expenditure**

The GHD peer review report in Attachment 4 is provided by QR as justification for the prudence of its proposed capital expenditure. Yet there are numerous parts of that GHD report, which should cause the QCA to question the evidential value of the review and its conclusions.

By way of some select examples:

- (i) a number of the exclusions from GHD's consideration raise real questions about how meaningful the GHD peer review was. For example:
  - (A) on page 13 GHD notes: *We did not review the hire charges for plant and machinery.....;*
  - (B) on page 32 GHD notes: *We did not assess the unit rates for machinery,...We did not assess the unit rates for miscellaneous permanent way components;*
- (ii) GHD reviewed only the labour rates but made no comment on the quantum of labour or total labour cost. Given labour is a significant percentage of costs, the peer review has not provided a useful assessment of efficiency;
- (iii) on page 28, GHD appear to have made an error in adjusting the unit cost of bridge width by increasing costs by 1435 divided by 1067 instead of decreasing them by multiplying by 1067 divided by 1435. Given the error, GHD's conclusion that "*we consider Queensland Rail's proposed rate of [undisclosed amount] to be efficient*" cannot be relied upon; and
- (iv) in respect of the fifth project considered by GHD, the minor signalling renewals appears to be not fully scoped. GHD notes that it had... *no details on labour costs, individual components,...we cannot seek to verify the efficiency of Queensland Rail's proposal.*

All of that, together with the limited sample of projects included, means that the GHD report is hardly conclusive in aspects of prudence of cost or scope of QR's proposed capital expenditure.

Accordingly, and particularly in the context of the capital expenditure having a very high impact on the tariff and the potential for a material change in volume, NHG considers that it is warranted for the QCA to obtain separate impartial technical advice so as to reach an independent and informed view on the prudence of the proposed capital expenditure.

### **9.3 Depreciation**

NHG supports the use of asset lives for AU2 which are consistent with the asset lives approved by the QCA for AU1.

### **9.4 Maintenance expenditure**

#### **(a) NHG comments**

In Section 2.9.1, Figure 8 of the QR Submission (and Figure 1 in Attachment 5) shows a step-up in proposed maintenance expenditure of 8.7% in real terms assuming constant tonnage.

Similarly, Figure 7 in Attachment 5 shows an increase in total maintenance costs from AU1 to that proposed in connection with the 2020 DAU for the low tonnage scenario. This is counter-intuitive given the reduction in tonnage for this scenario compared to AU1.

The redactions (in particular of Table 12 in Attachment 5 and in Figure 8 of Attachment 5) make it practically impossible for stakeholders to provide detailed comments on the prudence of individual cost components.

Part of the issue is that QR appears to consider a very high proportion of its maintenance costs are fixed. QR's assessment of fixed maintenance costs of 62% is considered by NHG to be too high.

Most maintenance costs can be made variable, particularly over a number of years.

In particular:

- (i) given the lower volumes in the low tonnage scenario, there should be more time to maintain the track making on-track working time more efficient. Rather than costs going up in real terms for constant tonnage as per Figure 9 of Attachment 5, some significant productivity improvement would have been expected;
- (ii) page 13 of Attachment 5 suggests that the bridges are generally fit for purpose but don't meet modern design standards. This would suggest an ability to defer some expenditure particularly if volumes decrease, such that speed restrictions or other measures could be imposed without removing capacity that was required to meet demand;
- (iii) Table 7 of Attachment 5 shows rail renewal as 50% fixed. This is, by contrast, considered to be highly variable as rail is not replaced unless worn to below wear limits;
- (iv) similarly, rail repair would be expected to be highly variable with volumes; and
- (v) the 36 days of closures proposed in Section 4.6 of Attachment 5 lends itself to the use of contractors. QR has not indicated any plans for the use of contractors to help reduce maintenance costs to more efficient levels and convert more of the fixed costs to variable costs.

It is difficult in that context to reach the conclusion that QR's proposed maintenance allowance is prudent or efficient.

The QR Submission goes on to comment that ...*if the effect of re-including \$1.5 million per annum in ballast undercutting costs in the DAU2 maintenance allowance is excluded, DAU2 maintenance costs for a [redacted word] are forecast to be an average of 2 per cent per annum higher over the DAU2 period.* Again, this suggests QR considers there are no productivity improvements which will be achieved across the term of the 2020 DAU.

The clear implications from QR's estimated future costs (relative to the previous costs), in Table 16 and Figure 9 of the QR Submission, is that QR has a fixed labour force with only the allocation of expenditure changing either side of Jondaryan.

Section 2.9.4 indicates that Queensland Rail's consultant GHD conducted a peer review of *eight activities accounting for more than 40 per cent of Queensland Rail's total costs on the West Moreton System.* GHD is quoted on page 34 ...*where the data were available..* suggesting that the peer review was less conclusive given close to 60% of the costs were outside the scope of the review and the express qualification about data availability.

**(b) GHD peer review: Maintenance**

The GHD peer review report in Attachment 6 is provided by QR as justification for the prudence of its proposed maintenance allowance. Yet there are numerous parts of that GHD report, which should cause the QCA to question the evidential value of the review.

Page 7 indicates a two-day site visit was limited to seven locations between Toowoomba and Rosewood and one location immediately west of Toowoomba. This appears to be a relatively limited sample to assess infrastructure condition and report on QR's prudence of scope and cost.

The contents of the last paragraph before Section 6 on page 22 is unclear due to the redacted text. We assume it relates to benchmarking with Aurizon, which, based on the QCA's previous findings in relation to its maintenance practices, tends to be inefficient in its maintenance practices.

Paragraph 8.3 on page 30 suggests that GHD were unable to assess the efficiency of rail renewal ... *Without knowing what the proposed scopes are for.....we cannot infer what unit rate for rail renewal has been applied.* It is therefore unclear how GHD then go on to conclude that QR is not undertaking the activity inefficiently, given they were not sure of the scope of the activities involved (or the unit rates).

In Section 13.1 GHD determine the fixed/variable cost split to be 62/38% respectively. However, there are a number of items in Table 4 where the fixed proportion of maintenance can be disputed. For example, ballast undercutting, rail renewal, turnout maintenance, maintenance ballasting, rail stress adjustment, top and line resurfacing, rail repair, mechanical resurfacing and rail grinding should have much lower proportions of fixed costs as these should each be heavily influenced by traffic volumes.

On page 7 of Queensland Rail's 2020 DAU Maintenance Submission, the average annual cost per kilometre is shown as \$67,767 per km for the regulatory period 2013/14 to 2016/17. For a similar tonnage on the Moura Line, Aurizon's maintenance costs are forecast to be less than half that, at approximately \$29,000 per kilometre (\$FY2016) for the financial years 2018 to 2021.

Figure 5 below compares Moura and QR forecast costs for the high scenario for the year 2020/21:

**Figure 5: Moura & West Moreton System Maintenance Cost Forecasts 2020/21**

Maintenance Element	QR (\$2020/21, millions)	QR (\$2020/21) cost per track kilometre	Moura System (\$FY 2016, millions)	Moura System (\$FY2016) cost per track kilometre
Track	24.0	\$67,345.51	7.3	\$23,080.54
Structures	3.0	\$8,294.94	0.2	\$665.78
Trackside Systems	1.5	\$4,120.79	1.6	\$4,971.19
<b>Total</b>	<b>28.4</b>	<b>\$79,761.24</b>	<b>9.0</b>	<b>\$28,717.52</b>

Note: Moura system data taken from graph on page 20 of Aurizon Network Annual Maintenance Presentation, March 2017.

Understandably, the structures cost is forecast to be much higher for the West Moreton system due to higher cost timber bridge maintenance. Regardless of the impact of inflation, track maintenance costs are substantially higher on a per kilometre basis for the West Moreton system. The Moura system costs include ballast undercutting, resurfacing, rail grinding and general track maintenance. Both the Moura and West Moreton systems have formation problems. The principal difference between the systems is the mix of sleepers and rail sizes on the West Moreton system compared to more uniform concrete sleepered track on the Moura System. There is no suggestion that the Moura costs are efficient or prudent. However, given most of the track maintenance tasks are similar excluding the sleeper types, it suggests opportunities for lower track maintenance costs on the West Moreton system

NHG considers that it is warranted for the QCA to obtain separate impartial technical advice so as to reach an independent and informed view on the prudence of the proposed maintenance costs.

## **9.5 Operational expenditure**

Section 2.10 of the QR Submission outlines QR's build-up of operating expenditure. The approach is disputed by NHG at a number of levels.

A key example, is that QR have not explained why two controllers 24/7 are required for the West Moreton system. Arguably, it would be more efficient and adequate to have two controllers on day shift while there are maintenance workers seeking track access, and one only for the rest of the time.

In addition, a series of other costs are identified which are effectively overheads. Fifty four percent of Total Operating Expenses in Table 18 are overheads in one form or another. This suggests inefficiencies or cost allocation biased towards the West Moreton system (where costs are more easily recovered through reference tariffs). It is suggested that the QCA seek efficient benchmarks to compare QR's proposed operating cost allowances.

## **9.6 Other issues in respect of the 2020 DAU West Moreton Reference Tariff**

### **(a) Responses to Section 2.11 of QR Submission**

This section provides comments on Section 2.11 of the QR Submission.

QR has provided commentary on a range of issues in this section, most of which do not relate directly to the content of the proposed undertaking.

These comments include:

- (i) **thermal coal prices have increased since 2016:** QR notes that "AU1's West Moreton System Reference Tariffs were set at the bottom of the international coal pricing market". While this is a reasonably accurate statement, we are unsure of its relevance, other than to note that QR may face reduced short-term risks in the current environment. However, we note that the QCA did not take the difficult coal market conditions into account in reaching its 2016 Decision, and that a longer-term perspective remains appropriate;
- (ii) **ceiling tariff, loss capitalisation, setting tariffs at 1mtpa increments:** we note the discussion of these concepts and QR's intention to consult on these issues in the future. Our understanding is that QR is not seeking approval of the ceiling tariff for the low volume scenario. If this is to occur in the future, then we consider that the ceiling tariff should be based on a genuine assessment of unavoidable capex, opex and maintenance costs at the lower tonnage level, and will require consideration of the optimisation of the asset base.

We note that QR has proposed to continue the existing practice of recovering costs via a two-part tariff. NHG disagrees with this approach, which results in NHG's New Acland mine paying higher tariffs than the Yancoal's Cameby Downs mine. We estimate that the blended tariff of \$22.39/gtk represents \$25.26/gtk for New Acland, and \$17.97/gtk for Cameby Downs, a premium for New Acland of around 40%. We request that the QCA reconsiders this approach.

We also request that the QCA confirms that Cameby Downs will be contributing sufficient revenue to cover the full incremental costs of this service, taking into account:

- (i) the revenue contribution (based on the two-part tariff, if this is to be approved);
- (ii) the portion of the RAB attributable to the section between Jondaryan and Columboola. We understand that this was initially set at an equal value per kilometre to the Jondaryan to Rosewood section, but will now vary due to capital expenditure within each section;

- (iii) a share of the RAB between Rosewood and Jondaryan, to the extent that expenditure within this section could have been avoided in the absence of services originating at Cameby Downs (including any projects undertaken to facilitate the original entry of Cameby Downs);
- (iv) maintenance costs between Jondaryan and Columboola (provided by QR in its maintenance submission);
- (v) an allocation of operating costs; and
- (vi) variable maintenance costs between Rosewood and Jondaryan, attributable to the services from Cameby Downs.

NHG's analysis (which we accept is indicative) shows that the revenue contribution from Cameby Downs would not be sufficient to recover items (ii) and (iv). We have not sought to estimate values for the remaining items. It therefore appears likely that the proposed arrangements will represent a subsidy from the New Acland mine to the Cameby Downs mine.

## **10 Issues specific to the Metropolitan System reference tariffs**

NHG supports the continuation of the 'proxy' methodology for the development of the Metropolitan system reference tariffs.

Our understanding is that the QCA's intention, as set out on pages 173 and 174 of the June 2016 Decision, was that the AU2 Metropolitan tariff would reflect the AU1 tariff escalated by CPI, plus allowance for any coal-specific investment within the Metropolitan system (which QR has advised is nil). QR's proposal seems to reflect this approach.

## **11 Conclusions in respect of Reference Tariffs**

For the reasons set out in this submission, NHG consider that the West Moreton reference tariffs proposed in respect of the 2020 DAU is clearly not appropriate to approve where proper regard is had to the matters in section 138(2) QCA Act.

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If the QCA has any queries in relation to this submission, please do not hesitate to contact Sam Fisher, General Manager Marketing and Logistics on (07) 3108 3668.

**Schedule 1 – Letter to DTMR regarding coal path constraints - REDACTED**



## Schedule 2 - References to response to QCA Notice in NHG Submissions

	<b>QCA Notice Topic</b>	<b>Section(s) in NHG Submission</b>
<b>Access Undertaking</b>		
1.	Mechanism for amending the operating requirements manual	Volume 2, 2.2
2.	Amendments to the capital expenditure approval process	Volume 2, 2.3
3.	Limits on price differentiation	Volume 2, 2.4
4.	Mechanism for determining pricing at renewals	Volume 2, 2.5
5.	A new category of possessions ('ad hoc planned possessions')	Volume 2, 2.6
6.	A dispute resolution mechanism that applies only to access seekers and not to access holder or other parties	Volume 2, 2.7
<b>Standard Access Agreement</b>		
7.	In the standard access agreement, Queensland Rail's proposal to limit its liability for failing to meet performance levels	Volume 2, 3.5
8.	In the standard access agreement, the proposal requiring at least six months' access charges as security	Volume 2, 3.4
<b>Reference Tariffs</b>		
9.	In the report from Frontier Economics provided with the 2020 DAU, the characterisation of Queensland Rail's risks (by reference to all the different parts of its network) for the purposes of assessing the weighted average cost of capital (WACC) used to calculate tariffs for West Moreton coal services	Volume 1, 8.4 to 8.7
10.	Approach to tariffs for coal services on the Metropolitan system	Volume 1, 10
11.	West Moreton tariff mechanism, including (a) forecast volumes, reflecting the potential for mines to open, close or vary their production (b) changes in expecting operating and capital costs that might result from those changes in volumes (c) the timing and status of the proposed Inland Rail project, and its potential effect on required capital expenditure; and (d) the approach to incentives for Queensland Rail, and for existing and potential customers	Volume 1, 5 to 9

### Schedule 3 – Comparison of QR and Aurizon Network risk protections

Features of the regulatory framework	QR proposal	Comparison with Aurizon Network
Ability to submit draft amending access undertaking	QR may propose changes to its access arrangements at any time in accordance with the DAAU process set out in the QCA Act.	The same protection is available to Aurizon Network.
Protection from volume risk	<p>Take or pay is proposed to apply at 100 per cent of contracted access charges, providing QR with significant protection from volume risk. QR only bears volume risk to the extent that forecast tonnes exceed contracted tonnes.</p> <p>Additional protection is offered through the ability of QR to seek changes to its reference tariffs where a “review event” occurs.<sup>32</sup> This mechanism can be used to adjust reference tariffs where volumes are lower (or higher) than expected. For example, the QCA recently approved an increase to reference tariffs to reflect a reduction in the number of contracted train paths from NHG’s New Acland mine.<sup>33</sup></p>	Aurizon Network is subject to similar protections from volume risk through take or pay arrangements, as well as a revenue cap.
Ability to recover capital expenditure	There is limited scope for optimisation of capital expenditure undertaken by QR.	Scope for optimisation of the Aurizon Network asset base is similarly limited.
Depreciation / cost recovery profile	QR may seek to accelerate depreciation on certain assets where it appears that the economic life of those assets is shorter than previously anticipated. A change to the depreciation profile may be proposed as part of a DAU or DAAU.	Aurizon Network similarly has scope to seek accelerated depreciation. The QCA has previously accepted proposals by Aurizon Network for accelerated depreciation.
Limits on liability for capacity shortfalls and/or failure to meet performance standards	Under QR’s proposed access agreement, it will generally not be liable for damage to or loss or destruction of any property, or any injury to or death of any	Similar protections apply to Aurizon Network.

<sup>32</sup> QR DAU, Schedule D, cl 5.

<sup>33</sup> QCA, Final Decision to approve New Hope Review Event, 19 July 2018.

	<p>person, arising out of or in connection with the standard, capability or condition of the network, any failure of or defect in the network, or any failure to meet performance levels.<sup>34</sup> QR's liability is also limited in cases of delay or non-provision of access.</p>	
Protection from cost risk	<p>As noted above, QR may seek changes to its reference tariffs where a "review event" occurs.<sup>35</sup> This mechanism can be used to adjust reference tariffs where there is a material change in QR's costs.</p>	The same protection applies to Aurizon Network.
Security requirements / relinquishment fees	<p>QR may recover relinquishment fees where an access holder relinquishes all or part of its access rights.<sup>36</sup></p> <p>Unless otherwise agreed, the relinquishment fee will be 80 per cent of the present value of the aggregate of the take or pay charges that would have been payable on and from the relinquishment date until the end of the term of the access agreement.</p> <p>The standard access agreement permits security to be required as a condition of providing access.</p>	Similar protections apply to Aurizon Network.

<sup>34</sup> QR Access Agreement, cl 13.4(a).

<sup>35</sup> QR DAU, Schedule D, cl 5.

<sup>36</sup> QR Access Agreement, cl 21.2.