

**QR SUBMISSION RESPONDING TO THE ACCC
AUSTRALIAN RAIL TRACK CORPORATION
UNDERTAKING ISSUES PAPER**

MAY 2001

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1. INTRODUCTION

This paper is in response to the Australian Competition & Consumer Commission's (ACCC) *"Australian Rail Track Corporation Access Undertaking Issues Paper"* which was released in March 2001. The ACCC issues paper seeks comments and feedback from interested parties on aspects of Australian Rail Track Corporation's (ARTC) Access Undertaking, which is a voluntary undertaking lodged with the ACCC on 22 February 2001. The undertaking sets out the terms and conditions of providing access to the interstate mainline standard gauge track linking Kalgoorlie in Western Australia, Adelaide, Wolseley and Crystal Brook in South Australia, Broken Hill in NSW and Melbourne and Wodonga in Victoria in accordance with Part IIIA of the *Trade Practices Act 1974* (TPA). In seeking comments, the ACCC has provided a number of questions that relate to the ARTC undertaking, the responses to which the ACCC intends to use to assist with the assessment of the draft access undertaking.

QR has been involved in a similar process to that currently being undertaken by the ACCC, having submitted to the Queensland Competition Authority (QCA) a draft undertaking in December 1998 as provided for in Section 136 of the *Queensland Competition Authority Act 1997*. Subsequent to receiving QR's voluntary undertaking, the QCA undertook a consultative analysis of both the draft undertaking and a further series of related documents addressing specific issues that the QCA wished to consider in conjunction with the draft undertaking. The QCA released its draft decision in December 2000 with provision that comments from interested parties be forwarded to the Authority by 30 March 2001. The QCA has identified that it intends to release its final decision in June 2001.

While QR's undertaking is still to be finalised, it is notable that the QCA, QR and interested parties are in general agreement with regard to the broad objectives to be achieved through QR's undertaking. There is also considerable agreement on the manner in which many of these objectives are to be achieved. In saying this, there are still a number of significant issues remaining to be resolved.

Due to the many common issues faced by all railway managers, various provisions in ARTC's undertaking are similar to those in QR's undertaking. Where this occurs and where appropriate, in responding to the ACCC's issues paper on ARTC's undertaking, QR has attempted to draw upon its own experience and the comments and concerns expressed by other parties during the consultative process applying to its undertaking. In writing its response, QR has generally used a numbering system consistent with the ACCC's issues paper.

3. ISSUES

3.1 PART 1 PREAMBLE

Is the ARTC undertaking accommodating of possible moves by other States or Territories to establish an appropriate interface with their respective access regimes?

QR recognises the merit of rail access regimes across Australia facilitating a consistent approach to the provision of access. In saying this, it may not be appropriate to require all railway managers to maintain perfectly consistent access requirements, as they may have legitimate reasons for adopting different approaches to certain issues. For example, while QR and ARTC have similar provisions in their undertakings in relation to many issues, one significant difference that exists is in relation to interface management where QR takes a more active role than ARTC. QR has taken its approach due to the legal and technical advice it has received in

relation to its particular circumstances. QR would consider that ARTC's approach has also been formed due to advice on its own particular circumstances¹.

In saying this, QR believes the maintenance of consistency, or the incorporation of ways to manage any inconsistencies, across the various rail access regimes should be a consideration of the ACCC in assessing ARTC's undertaking. QR further considers that it may be appropriate for ARTC to include provision in its undertaking to enable it to revise its undertaking (with ACCC's agreement) in order to facilitate the promotion of consistency across rail access regimes in the future.

SUMMARY

- **QR considers that the ACCC should, in the interest of promoting consistency, have regard to the provisions in other rail access regimes around Australia when assessing the ARTC undertaking.**
- **QR considers it may be appropriate to allow ARTC to review its undertaking in the future to facilitate the promotion of consistency across rail access regimes.**

3.3 PART 3 NEGOTIATING FOR ACCESS

3.3.1 Parties to a Negotiation

Are the processes for the initial phase of negotiations reasonable? Are the criteria ARTC intends to use to "screen" applicants appropriate?

The processes for the 'initial phase of negotiations' in the ARTC undertaking include preliminary meetings, the exchange of information between ARTC and the access seeker and provisions allowing the screening of unsuitable applicants (i.e. the access seeker must be solvent and must comply with the relevant obligations and applicable processes set out in the undertaking etc). QR has addressed these issues concurrently.

The collection of sufficient information in the initial phases of negotiations is essential for the railway manager to be able to make a sound assessment of its ability to meet an access seeker's access requirements and develop the price for the service. Through the provision of adequate information by the access seeker, the railway manager can prepare a better indicative access proposal than if insufficient information were received. It is in the interest of all parties that this occur. Notably, the information to be exchanged by ARTC and access seekers is generally consistent with that provided for in QR's undertaking, although QR's undertaking provides a more detailed description of the relevant information.

One of the aims of an access undertaking should be to provide certainty for access seekers and railway managers alike. With regard to the process that will govern the negotiation of access to rail infrastructure, a railway manager should not be obliged to negotiate with an access seeker that is not genuine about gaining access to its network or does not have the capacity to meet the obligations of an access agreement.

Solvency requirements and the requirement for the demonstrated financial capacity of an access seeker to fulfil the obligations to which they commit do no more than protect the legitimate business interest of ARTC so that ARTC does not have to negotiate with an access seeker who is unlikely to have the financial capacity to undertake the above rail services they claim to seek.

¹ Refer Section 3.9 of this document for discussion on interface differences between QR and ARTC

This is generally consistent with approaches adopted elsewhere. In the Western Australia rail access regime an access seeker is required to show it has the necessary financial resources to carry on the proposed rail operations. QR's undertaking places similar requirements on an access seeker as is proposed by ARTC.

Similarly, provisions reserving the right of ARTC to only negotiate with applicants who comply with the relevant obligations and applicable processes set out in the undertaking protect ARTC's legitimate business interests from frivolous or vexatious applications. Notably, this is balanced by the additional requirement that it is only where ARTC considers such non compliance to be material that ARTC can discontinue negotiations. The request for written reasons for refusal and the availability of a dispute resolution process serve to protect the legitimate interests of an access seeker.

SUMMARY

QR considers that the provisions in the ARTC undertaking regarding the processes for the initial phase of negotiations and relating to ARTC's ability to "screen" applicants are reasonable, and are consistent with those expected to be included in QR's undertaking.

3.3.2 Indicative Access Proposal

Does the Indicative Access Proposal contain sufficient information and details to enable the access seeker to adequately evaluate the proposal? Does the Indicative Access Proposal provide an adequate basis for meaningful negotiations?

ARTC and QR have included similar provisions regarding the information to be included in the indicative access proposal, with the only variances being that ARTC's undertaking does not specifically state that the indicative access proposal is to include the rollingstock and rollingstock configuration to which the indicative access proposal applies and a summary of the applicable operating characteristics (e.g. frequency, transit time, commodity carried). At the same time ARTC does not preclude this information being included if appropriate and, it should be noted, ARTC seeks this information from the access seeker in the access application.

In QR's experience in relation to requests for access, the information contained in the indicative access proposal is typically sufficient to meet the majority of access seekers' initial needs. QR has noted that where access seekers seek additional information at this stage it is usually specific to that operation and their particular requirements. QR has not identified any additional information that is consistently sought by access seekers at this stage of the process. In addition, the QCA's consultation process did not identify any further information that either the QCA or other stakeholders considered should be provided at this stage of the negotiation process.

On this basis, QR considers that ARTC's indicative access proposal does contain sufficient information and details to enable an access seeker to adequately evaluate the proposal and begin meaningful negotiations.

SUMMARY

QR considers that the information that ARTC plans to include in its indicative access proposal is sufficient to enable the access seeker to adequately evaluate the proposal and begin meaningful negotiations, and is consistent with the expected requirements of QR's undertaking.

3.3.3 Negotiation

Are the various negotiation steps reasonable? Do they define the framework for negotiations and allow meaningful negotiations to occur? Are they likely to lead to outcomes that are beneficial to both ARTC and access seeker?

The negotiation steps incorporated in ARTC's undertaking are very similar to those proposed by QR in its undertaking. This negotiation framework is built upon facilitating a flow of information so that all parties can make informed decisions, while providing for appropriate safeguards for both parties. In terms of safeguards, ARTC's undertaking contains a comprehensive dispute resolution process (as discussed in section 3.3.4 of this paper), which protects the legitimate interests of both access seekers and ARTC. It also specifies the conditions under which negotiations can be ceased, protecting the legitimate interests of the railway manager (ensuring that negotiations are only required to take place where an access seeker is both genuine about access and has the ability to undertake its commitments) and provides certainty for the access seeker (clearly setting out the reasons under which negotiations can be ceased).

QR's experience is that different negotiations can vary substantially from each other with different issues being critical depending on the individual circumstances. Therefore, QR does not consider that it is practical or effective to attempt to include a detailed negotiation framework in an access undertaking. Rather, QR considers it essential to put in place a broad framework that can be flexibly applied to each individual case. The QCA's consultation process did not identify any variation to these negotiation steps sought by either the QCA or other stakeholders.

QR considers ARTC's negotiation framework contains the necessary flexibility to allow negotiations to adapt to the individual needs of all parties, as well as ensuring the appropriate safeguards required to protect the legitimate interests of all parties.

SUMMARY

QR considers the various negotiation steps in ARTC's access undertaking are reasonable and are consistent with the negotiation steps expected to be included in QR's undertaking.

3.3.4 Dispute Resolution

Are the dispute resolution processes reasonable, appropriate and adequate? Does the undertaking clearly describe the various stages of the process for resolving

disputes? Is there sufficient detail on the nature of issues that may be subject to the dispute resolution process?

Are the powers, functions and jurisdiction of the dispute resolution bodies appropriate and clearly defined? Are the enforcement mechanisms adequate and clearly defined?

ARTC incorporates a three tier approach to dispute resolution in its undertaking involving chief executive resolution, mediation and arbitration. QR notes that with respect to its own draft access undertaking stakeholders were generally supportive of a dispute resolution process involving chief executive resolution as an initial step. Beyond the chief executive resolution, there is some variance in the methodologies with regard to dispute resolution procedures, but both ARTC's and QR's undertakings provide for disputes to be ultimately resolved by an independent party. This was a critical issue for stakeholders in relation to QR's undertaking.

QR believes that ARTC's undertaking clearly identifies the disputes covered by its terms stating that its scope extends to a dispute arising under the undertaking or in relation to the negotiation of access between an applicant and ARTC. Therefore, it has a broad application, making it not necessary to specify all issues that can be referred to disputes resolution. Disputes in relation to an access agreement (once executed) are to be dealt with in accordance with the provisions of that access agreement and not under the undertaking.

SUMMARY

QR considers it reasonable to include chief executive resolution as the first step for dispute resolution, provided that, in the event the dispute is not resolved, both parties have the option of referring the dispute to an independent party. While different to the dispute resolution processes in QR's undertaking, both QR's and ARTC's undertakings incorporate these provisions.

3.4 Part 4 PRICING PRINCIPLES

Are the definition of "floor" and "ceiling" revenues appropriate?

ARTC has proposed a "floor" and "ceiling" approach to pricing that, while having many qualities similar to the constrained market pricing methodology adopted by other railway managers including RAC, WestNet and QR, varies in some aspects from the generally accepted constrained market pricing limits.

QR and ARTC have both incorporated in their draft undertakings pricing limits that include upper and lower limits for access charges. However, while being consistent in this, they vary in the manner in which these limits are calculated. Under QR's proposed methodology revenue limits are applied to both the individual train service and to any combination of train services (e.g. all services operating in the system in which that individual train services operates). Therefore, QR undertakes both a combinatorial test and an individual test to ensure there is no cross subsidisation between individual train services or between combinations of train services.

In contrast, ARTC's proposed pricing methodology does not make provision for both an individual test and combinatorial test to determine pricing limits. Under ARTC's definitions, the floor limit means the charges which, if applied to all operators on a segment or group of segments would generate revenue for ARTC sufficient to cover the incremental costs of that segment or group of segments. Similarly, ARTC defines the ceiling limit to mean the charges which, if applied to all operators on a segment or a group of segments would generate revenue

for ARTC sufficient to cover the economic cost of that segment or group of segments. The price limits for individual services are therefore determined based on an 'average cost' methodology which would result in a lower ceiling limit and a higher floor limit than under the more typical constrained market pricing approach used by other railway managers.

While ARTC may have legitimate reasons for adopting a narrower range for price differentiation, QR considers it to be more economically sound to incorporate into access regimes the full price limits that are consistent with constrained market pricing for other railway managers in Australia and many countries around the world. This also has the benefit of facilitating consistent pricing principles in various rail access regimes.

SUMMARY

QR recommends ARTC incorporate a more typical constrained market pricing approach in its undertaking making provision for both a combinatorial test and an individual test for the determination of ceiling price limits (based on stand alone costs) and floor price limits (based on incremental costs).

Do pricing principles contain sufficient incentives for the economically efficient use of tracks by operators and efficient maintenance and investment in the infrastructure by ARTC? If access prices are only approximately set on the basis of costs, does this mean that ARTC has little incentive to seek efficiencies and reduce costs over time?

In responding to this question, it is important to first recognise that due to the characteristics of the market in which ARTC currently operates, ARTC does not appear to be in a position to charge monopoly rents. In particular, ARTC appears to base its prices on an asset value significantly less than the DORC valuation of its assets. Therefore, ARTC is already charging prices below the allowable revenue limit.

QR is of the view that where a railway manager is clearly charging less than the ceiling price, additional obligations should not be placed upon that railway manager through the imposition of efficient cost limits for the calculation of access charges. QR recognises the importance that the ceiling limit be based upon the DORC valuation and efficient operating costs (including maintenance costs) and accepts that the maximum revenue a railway manager should be able to earn must not exceed this. However, where the maximum allowable revenue cannot be attained QR considers that the railway manager should be permitted to charge any price it considers appropriate within the determined floor and ceiling limits, provided it is not for an inappropriate purpose such as distorting competition in the market.

Where a business is not recovering a return on its full asset value (based on a DORC valuation) QR believes that there is strong incentive for it to seek efficiencies and cost reductions. As a result, ARTC would be expected to have a strong incentive to seek to improve the market value of its business through means such as cost savings. It is not necessary to attempt to enhance this incentive through regulatory measures.

SUMMARY

QR considers that the pricing principles contained in ARTC's access undertaking offer sufficient incentive for the efficient maintenance and investment in the infrastructure by ARTC.

Are the fixed and variable components of the access charge set appropriately? Is the allocation of the unattributable costs soundly based and does it contribute to efficient outcomes?

ARTC has included a two part tariff in its undertaking. Theoretically, the fixed portion of the two part tariff would be used to “allocate” the recovery of the service provider’s fixed costs from the various users. The approach used for assessing the fixed charge is normally unrelated to the users’ usage of the service, but may vary between users according to the perceived ability of particular users (or groups of users) to contribute to the recovery of those fixed costs. The variable element of the two part tariff would be structured in order to, as far as possible, mimic the long run marginal cost of production, so that individual users’ consumption decisions are not distorted through the approach to recovering the fixed costs of the service provision.

ARTC’s access charges include a part of the charge that is levied on a per km basis (referred to as the fixed charge) and a component levied on a per kgtkm basis (referred to as the variable charge). QR’s access charges for coal carrying services will be somewhat more complicated than this, with two variable components – one on a per kgtkm basis and one on a per train path basis, and the fixed charge being collected through a combination of a per kntkm and a per net tonne basis. An additional charge will be levied on trains accessing QR’s electric overhead system.

The effectiveness of access charges can be measured in terms of their ability to achieve certain outcomes. For example, tariffs should be set in a manner that will promote the efficient utilisation of the network, ensure the appropriate sharing of risk and so as to allocate volume benefits in an appropriate manner i.e. reward increases in total volume rather than simply encourage changes in market share of different operators. Rail systems are characterised by the ability to have substantial cost tradeoffs between the provision of rail infrastructure and the operation of train services on that infrastructure. Optimisation of the performance of the rail infrastructure will not necessarily result in optimisation of the performance of the logistics chain. Therefore, it is necessary for the access pricing to reflect the appropriate signals for the railway manager and operators in terms of the need for additional investment.

The effectiveness of the pricing structure in creating these appropriate incentives for railway operators will depend upon the accuracy of the pricing structure in reflecting the impact on the railway manager’s costs resulting from the operations of different types of train services. This will in turn depend upon the pricing formula’s ability to accurately reflect the appropriate cost drivers and whether the values attributed to the cost drivers accurately reflect the manner in which the railway manager’s costs vary. In addition, it is necessary that the fixed costs are not levied on a basis that provides inappropriate incentives to the operator.

In QR’s experience, the assessment of incremental cost for incorporation in a multipart access charge is not a simple exercise, and the extent of incremental costs will potentially vary over time, particularly in the event of significant changes in train operations or volume. The adoption of substantially over or understated incremental costs in establishing the variable components of a multi part tariff could encourage operators to behave in a manner that is to the detriment of the rail systems as a whole.

QR is not in a position to comment on whether ARTC’s proposed access charges are reasonably reflective of incremental cost. This is presumably an issue that ARTC is comfortable with. However, given QR’s above comments QR considers that it may be appropriate to enable ARTC to review the two part tariff if it becomes apparent that the tariff structure is leading to inappropriate pricing signals, for example, if the tariff is leading to perverse decisions on the part of operators for the purpose of minimising access charges, or if the operating paradigm on a system changes to such an extent that the cost elements are no longer reflective of future incremental costs.

SUMMARY

QR considers that it may be appropriate to enable ARTC to review its two part tariff if it becomes apparent that the tariff structure is leading to inappropriate pricing signals.

Has the Capital Asset Pricing Model been properly used to arrive at the weighted Average Cost of Capital for ARTC? How appropriate are the assumptions that have been used to derive the various parameters?

QR considers ARTC's use of CAPM and WACC to be an appropriate means of assessing the required rate of return, but would like to comment on certain of the assumptions ARTC has used behind its determinations.

(a) Market Risk Premium

QR questions ARTC's use of the market risk premium (MRP) of 5.5% - 6%, considering a higher figure to be more realistic. In proposing a "low" MRP there is the underlying assumption that the MRP has declined over the last decade, a view reflected by the QCA in its draft decision on QR's draft undertaking. However, QR considers there is little empirical evidence to support this view. The history of Australian (and US) MRP shows high volatility, particularly when measured over five or ten year periods. This high volatility means that it is very hard to argue that the MRP measured over the last decade is not simply reflecting volatility. QR believes it would be a brave argument to suggest that there has clearly been a reduction in MRP. This issue has been considered closely by Dr Steven Bishop, and the attached excerpt from his report provides more detailed analysis to support this view (note Dr Bishop's full report is included in QR's submission to the QCA responding to the QCA's draft decision on QR's draft undertaking).

Based upon Dr Bishop's advice, QR believes that the MRP is best represented as a range between 6% and 8%. If a point estimate were used, QR believes that 7% is a reasonable assumption to apply, given the potential costs associated with discouraging investment in rail infrastructure. Notably, Dr Bishop's analysis included reference to research papers on this topic that have only recently been released.

(b) Gamma

QR also believes that ARTC's proposed gamma of between 0.5 and 0.4 may be too high. The gamma is intended to represent the value that an organisation's shareholders gain from each dollar of dividends that is covered by an imputation credit. ARTC's proposed value is not inconsistent with QR's original proposal of a gamma at 0.5 and proposed by the QCA in its draft decision. However, a recent working paper by Cannavan D, Finn F and Gray S, "The Value of Dividend Imputation Credits" November 2000² indicates that the value of imputation credits is significantly lower than this. It is acknowledged that the results of this paper are significantly different to previous studies. The reasons for these differences are:

- it incorporates the 45 day rule (introduced in 1997) which takes away the ability to trade the imputation credits and therefore decreases the value that can be attributed to those credits; and
- it takes a different econometric approach which allows for a larger sampling and tighter confidence intervals.

On this basis QR recommends that the valuation of ARTC's gamma be reviewed to take account of these new findings.

² QR's Submission responding to QCA's Draft Decision on QR's Draft Undertaking, April 2001, p. 35

(c) Beta

QR believes it is critical that it be recognised that the rate of return being established at this time reflects only the risks associated with existing assets with a proven demand. On this basis, QR believes that in the event that a railway manager constructs significant new assets, a separate analysis of the project risk should occur to identify whether a different rate of return should apply. For example, in relation to recent major rail projects, it is clear that the investment community is seeking higher returns than would be derived through the ARTC's proposed approach.

SUMMARY

- **QR agrees with the use of CAPM and WACC by ARTC to assess the allowable rate of return but believes that ARTC has chosen some parameter values at the lower end of the appropriate range. In particular, QR believes that the following parameter values would better reflect market conditions:**
 - **A market risk premium assessed between 6% and 8%, with a point estimate of 7%**
 - **The gamma reviewed on the basis of recent research which has indicated a value of significantly less than 0.5**
- **QR considers it is critical it be recognised that the rate of return being established now reflects the risks associated with existing assets with a proven demand. On this basis, QR believes that where significant new assets are constructed by an access provider a separate analysis of the project risk should occur to identify whether a different rate of return should apply.**

Is DORC the appropriate valuation methodology to apply in the case of ARTC's assets? Is there sufficient detail provided to assess the methodology employed to arrive at a DORC valuation and does the evidence suggest that the methodology is appropriate? Are there other models that should be used to value ARTC's assets such as historical cost, replacement cost or reproduction cost?

QR and ARTC have both included the depreciated optimal replacement cost (DORC) as the appropriate valuation methodology for their assets in their relative undertakings. Of the recognised approaches to valuing assets, QR considers that the DORC valuation methodology provides the most appropriate initial capital base for calculating revenue limits for rail infrastructure, provided the optimisation is conducted in an appropriate manner. This view received support from both IPART and the QCA.

QR recognises that there are various valuation methodologies and that the appropriateness of each of these will depend upon the nature of the industry and the assets applicable to that industry. In the context of both QR's and ARTC's undertakings, the value of the assets is as an input into the determination of the ceiling prices i.e. the maximum access charge that may be levied on an operator or group of operators.

In its issues paper the ACCC questioned the appropriateness of DORC analysis, requesting comment on other possible methodologies. To determine the appropriateness of DORC it is essential to first review the other recognised valuation methodologies. Asset valuation methodologies can first be broken down into two main categories:

- **Income based** approaches, where assets are valued according to the income earning capacity of the business; and
- **Cost based** approaches, where assets are valued according to their original (historical) purchase cost or according to some more current value, such as replacement or reproduction cost.

Income Based Approach

QR does not consider an income based approach to have a practical application for the purpose of deriving a price ceiling. Income based valuation derives an underlying value of assets through an assessment of their income earning ability, and makes use of techniques such as discounted cash flow analysis or capitalisation of earnings. In the context of QR's undertaking the main purpose of the asset valuation is to determine revenue limits based on stand alone cost. An income approach is clearly not consistent with such a principle as essentially the stand alone cost methodology relies on a cost based principle. While ARTC's undertaking does not specifically use a stand alone cost methodology, it replaces this with the 'full economic cost' of providing the service, which is similarly based upon DORC methodology and will form the basis of the ceiling limit. Therefore, the above comments have equal application to ARTC's undertaking.

Cost Based Approach

Cost based methodologies can be broken down into two categories: historical cost and current cost.

(a) Historical Cost

Historical cost valuation is based upon the original cost of acquisition of the entity (less where applicable, accumulated depreciation). Historical cost valuation has a number of limitations:

- in general, historical cost bears little resemblance to the value of the cashflows of today. Changing prices and changing technology cause historic costs to become poor indicators of the remaining service potential of the assets, and consumption thereof for the current reporting period;
- most expenses and revenue are normally expressed in current dollar values and, therefore, only current value information relating to assets (as opposed to historical value information) allows reliable calculation of return on assets and other performance indicators; and
- the use of historic cost valuations also pre-supposes that data of actual costs through time is available. Rail assets have long lives and, in many cases, were originally purchased a long time ago. In QR's circumstances it is difficult to locate the records of the original historic costs of many of its assets.

While historic cost based asset values can be adjusted for inflation, QR considers that this will not necessarily ensure that the asset values are reflective of the costs of developing a similar set of assets today. IPART³ supports this view, stating that "*prices based on historical cost will not give consumers the correct economic price signals in relation to the cost of that service today*". Also, inflation-adjusted estimates fail to capture the impact of technological change. Therefore, historical cost methodology falls short of what is required for asset valuation for regulatory purposes.

(b) Current Cost

Current cost valuation essentially involves the estimation of the current cost of replacing the asset. The concept of a notional new entrant that underpins the stand alone cost requirement of the ceiling test is consistent only with the current cost of replicating the system. A current cost valuation therefore has a meaningful analytical link to the ceiling price test in terms of contestability and opportunity cost.

³ IPART, *Aspects of the NSW Rail Access Regime, Final Report, April 1999, p99*

A number of asset valuation methodologies fall within the scope of a current cost valuation including:

- replacement cost (to provide the equivalent asset);
- depreciated replacement cost;
- modern equivalent asset method;
- optimised replacement cost; and
- DORC.

These approaches are essentially based on assessing the current cost of establishing a substitute set of assets. The approaches can be viewed as iterative, with each approach adding further issues for consideration in assessing the appropriate substitute set of assets. For example, the replacement cost approach assesses the current cost of establishing the same set of assets as new. The DORC approach assesses the current cost of establishing a set of assets that provides the required service potential and then adjusts to reflect the extent to which the life of the existing assets has already been consumed.

Considering current asset valuation approaches in terms of the stand alone test (as applicable to QR's rail access regime) it is logical to assume that the maximum amount a notional new entrant would pay for a substitute system is represented by the lowest alternative cost to replicate the existing system. In assessing what represents the lowest alternative cost, consideration would have to be given to the optimum set of assets that would be required to provide the reasonably foreseeable services required to be delivered by the system.

As a result QR considers that, provided optimisation is undertaken in a practical and pragmatic manner having regard to all relevant issues, the DORC methodology is the approach that is most consistent with the theoretical basis of the stand alone cost used in QR's pricing methodology provided the optimisation process is conducted in an appropriate manner. Again, while ARTC's undertaking does not specifically use a stand alone cost methodology, it replaces this with the 'full economic cost' of providing the service, which is similarly based upon DORC methodology and will form the basis of the ceiling limit. Therefore, the above conclusions have equal application to ARTC's undertaking.

As noted above, it is critical that an appropriate and reasonable optimisation framework is adopted. In this regard, QR believes that the optimisation approach should only assess infrastructure standards and capacity. That is, the optimisation should not attempt to address issues such as alignment, gauge and/or wagon capacity. The QCA's draft decision supports this optimisation approach and the approach adopted by QRTC is also consistent with this view.

Hybrid Approach

There is one additional approach worth examining. This is the hybrid or deprival value approach to asset valuation, which essentially represents a combination of costs and income based parameters. The hybrid approach asks the question "If the owner were deprived of an asset, would it be replaced". For assets that would be replaced, the value equates to the "current cost" methodology advocated above. For an asset that would not be replaced, the methodology produces a result which is based on the net cashflow an asset might generate in its best use.

The net cashflow value suffers from the problems noted in the discussion relating to income based approaches and earnings based valuations. Salvage value is also inappropriate to use in assessing the maximum amount of revenue that a railway manager can earn from the provision of access as it bears no relationship to what a hypothetical new entrant would need to spend to purchase an equivalent asset. QR does not consider the hybrid approach appropriate for use in the establishment of revenue limits.

QR considers the DORC methodology, which is generally supported for use for rail industry asset valuation by both regulators and rail managers, to be the most appropriate methodology for ARTC to include in its undertaking.

SUMMARY

QR considers DORC methodology for asset valuation to be appropriate for inclusion in ARTC's undertaking and is consistent with the approach adopted in other rail access regimes.

Does the proposed method for determining depreciation realistically reflect the expected decline in the economic value of assets? For those assets for which depreciation has been calculated, is there sufficient detail on the valuation approach used?

QR notes that ARTC nominated the use of straight line depreciation. However, by assuming an infinite life for track assets (provided regular maintenance occurs), ARTC is effectively using an approach for its track access that is more akin to a renewals annuity approach. Under a renewals annuity approach, an amount is charged to the operating statement each year, sufficient to maintain the track at the same level of effectiveness in perpetuity. The level of annuity charge is determined with reference to the current condition of the assets, and the future expenditure necessary to maintain the assets' operating capability.

QR considers that the assumption of an infinite life for track proposed by ARTC would be inappropriate in relation to QR's rail infrastructure. For example, much of the rail infrastructure in central Queensland is operated primarily as a service to the coal mining industry. However, the coal reserves in Queensland do not have an indefinite life and, once these reserves have been mined or mining is no longer economic, there will be little alternative use for the related rail infrastructure. Similarly, in relation to other areas of QR's network, QR believes an infinite life assumption to be unrealistic. As a result, QR needs to have reasonable assurances of recovering its initial capital outlay and, therefore, its ceiling test must allow for these capital costs to be recovered.

Similarly, IPART stated in its *Aspects of NSW Rail Access Regime, Final Report*⁴ that none of the submissions to their review supported the use of renewals annuity approach to asset consumption. The rejection of a renewals annuity approach in favour of a depreciation charges approach primarily reflected the view that the RAC coal lines do not have an indefinite life.

QR had originally proposed to use competition depreciation in relation to its rail infrastructure assets, recognising the benefits of this approach to limiting price shocks and promoting intergenerational equity. However, in order to achieve an outcome with the QCA, QR has agreed to accept the straight line depreciation methodology. In doing this, it is recognised that in some cases straight line depreciation will not accurately mirror the pattern of consumption of service potential, nor the impacts of obsolescence. Yet, straight line depreciation can provide a pragmatic and reliable overall approach.

In assessing the application of straight line depreciation, QR has typically assumed a maximum asset life of 100 years. It should be noted that QR remains of the view that competition depreciation has merit for application for regulatory purposes. In the particular case of ARTC, QR considers ARTC is best placed to determine the nature of its own assets and the asset life that best represents their character.

⁴ IPART, *Aspects of the NSW Rail Access Regime, Final Report*, April 1999

SUMMARY

Regulators have not adopted a consistent approach to assessing capital charges (including depreciation) for the rail industry in Australia. The adoption of straight line depreciation is consistent with the approach that will be incorporated in QR's undertaking, however, QR would not consider an infinite track life assumption appropriate in relation to QR's assets.

3.5 PART 5 MANAGEMENT OF CAPACITY

3.5.1 Capacity Analysis

Does the undertaking provide sufficient detail on how ARTC proposes to assess capacity? Can operators be satisfied that the approach taken by ARTC to assess capacity is appropriate?

A critical issue identified by stakeholders in relation to QR's access undertaking is that access seekers and operators are provided with enough information so as to feel confident that the railway manager is managing the network in the most efficient and effective manner, and in particular, that capacity is managed in a fair and consistent manner for all users of the network. The question then is what level of information can best achieve this outcome.

QR does not believe it to be practical to attempt to specify in detail the process for analysing capacity, as the analysis required to determine capacity availability may vary according to the particular circumstances of each access seeker - the type of traffic for which the capacity is sought and the geographical location of the proposed operations. For example, capacity analyses for metropolitan passenger services vary greatly to the capacity analyses required with respect to bulk grain traffics on QR's network.

QR believes there are better ways to assure access seekers and operators of the fairness of its capacity analyses. In particular, QR's undertaking will oblige QR to undertake capacity analyses consistently for QR operators and third party access seekers. In addition, QR will provide access seekers and operators with specified capacity information, in order for them to understand the context of the capacity analysis. QR's undertaking also provides an avenue for dispute resolution in the event of disagreement on capacity analysis, however, in such circumstances QR questions whether it is desirable to force a railway manager to accept additional traffic where there is some reasonable doubt as to the resulting robustness of the system, given the railway manager's responsibility to existing operators.

In consideration of stakeholder comment and the QCA's recommendations in its draft decision, QR has agreed to provide certain capacity information to access seekers and to operators. To this end, in QR's Submission responding to the QCA's Draft Decision on QR's Draft Undertaking⁵ QR agreed to include a provision in its undertaking to provide to all operators on the network:

- a Master Train Plan (MTP) for the relevant part of the network;
- a Daily Train Plan (DTP) for the relevant part of the network and day of operation;
- real-time train control information for the operator's train service/s; and

⁵ QR's Submission responding to QCA's Draft Decision on QR's Draft Undertaking, April 2001, p.51

- the operator's Access Co-ordination Plan⁶.

This information will be supplied subject to the following caveats:

- the identity of other operators will not be detailed;
- the terms and conditions of operators' capacity entitlements will not be detailed; and
- the MTP and DTP may not show all parts of the network, and as such may not show all train services that may impact upon the capacity of the infrastructure detailed.

The above information is only to be supplied to an operator with an existing access agreement. In other circumstances such as where parties are at the stage of applying for access or are currently conducting access negotiations with QR, QR has undertaken to provide the following information (also subject to the previously outlined caveats)⁷:

- a MTP;
- details of committed capacity upgrades; and
- a general description of known capacity constraints.

In certain circumstances, a DTP may also be provided to an access seeker, however, it should be noted that in most areas of QR's network the DTP would not assist an access seeker assess capacity availability any further than the MTP will. ARTC recognises as much in its response to the draft decision on QR's draft undertaking⁸ where it states that it does not consider that non coal-lines warrant the formality of the production of plans on a daily basis considering that capacity entitlements do not vary significantly each week. The exception to this will be traffics such as coal, where capacity entitlements will typically specify a number of train services between specified points within a weekly and or monthly period, and as a result, may vary significantly from day to day.

In light of the above, QR considers that its undertaking will go further than ARTC's undertaking does in relation to the provision of capacity information to access seekers and operators. However, QR understands that ARTC supplies supplementary information through less formal means than QR proposes.

Similar to QR's undertaking, ARTC's undertaking makes provision for an initial capacity analysis as part of the indicative access proposal and, where it is believed that there are impediments to the provision of additional capacity, where that capacity enhancement would have significant bearing on the economics of the proposed operation, a more detailed capacity analysis is undertaken.

In response to the ACCC's question, QR considers ARTC's approach to be adequate, provided stakeholders are comfortable that ARTC will analyse capacity in accordance with the principles of its undertaking. QR also notes that ARTC has included a dispute resolution process in its undertaking similar to that included in QR's undertaking. This should provide some assurance to access seekers and operators that their legitimate interests, as affected by capacity analysis, will be protected.

3.5.2 Capacity Allocation

Is there sufficient transparency about the process that ARTC will use to assign access rights in the case of applications for mutually exclusive rights? Is the

⁶ An Access Coordination Plan is a document compiled from an operator's access agreement. It details all of the operational and interface information concerning the operation that QR's scheduling and train control officers need to be aware of for them to perform their roles.

⁷ QR's Submission responding to QCA's Draft Decision on QR's Draft Undertaking, April 2001, p.51

⁸ ARTC's comments on the Draft Decision on QR's Draft Undertaking, 2001, p. 19

proposed method of granting access on the basis of the “highest present value of future returns” appropriate?

QR supports ARTC’s approach with regard to the assignment of capacity rights and the “highest present value of future returns” test. This approach is consistent with the principles in QR’s undertaking which provide that access rights will be allocated to the first operator QR can negotiate and execute an acceptable access agreement with, and where, at any time, two or more railway operators are seeking access with respect to mutually exclusive access rights, QR is entitled to seek to finalise an access agreement with the railway operator with whom QR can agree to terms and conditions, which are most favourable in terms of the commercial performance of QR’s below rail services. Therefore ARTC and QR have included similar provisions in their respective undertakings, provisions that QR considers are reflective of the normal commercial outcome expected in a competitive environment. However, in relation to QR’s undertaking, the QCA raised certain concerns with respect to the above requirements in its draft decision. In response to these comments QR will be making further additions to its undertaking.

These changes will recognise two concerns. Firstly, that a railway manager could grant access to one operator over another operator seeking access to mutually exclusive traffic, and by doing so preclude the unsuccessful operator from gaining the relevant end contract in circumstances where the successful operator has yet to be given a contract with an end user⁹. QR intends to amend its undertaking to provide that where more than one party is competing for access to carry the same product for the same end user, before executing an access agreement, QR would require the operator to demonstrate that the end user was agreeable to the execution of the access agreement with the operator, and that the operator had, or would in the immediate future hold the contractual right to provide the train services in question for the end user. The second concern is that QR not favour its own operators in determining which access seeker to sign an access agreement with, where more than one party seeks mutually exclusive capacity. In other words, QR must not finalise an access agreement with a party for the purpose of preventing or hindering access by another party. This second issue should not be a concern for ARTC as it is not a vertically integrated railway.

In light of QR’s experience, QR supports ARTC’s approach in principle, but highlights some of the other issues that can arise with respect to capacity allocation under these principles.

3.5.3 Capacity Transfer

Are sufficient details provided about the circumstances in which ARTC will withdraw access rights?

In QR’s experience, access seekers have wanted more detail to be specified regarding the capacity transfer provisions, particularly in relation to the resumption of capacity. QR notes that ARTC’s undertaking contains few specifics, broadly stating that where a customer has under utilised its capacity entitlement granted to it under an access agreement, the terms of the access agreement would provide that ARTC might reduce such train paths.

QR proposed in its draft access undertaking that where a railway operator consistently under utilises the access rights allocated to it under an access agreement for a period of six months and cannot reasonably demonstrate to QR a future requirement for those access rights, the terms of the access agreement will enable QR to reduce the rail operator’s access rights, provided the adjusted access rights are sufficient to meet the railway operator’s maximum monthly usage over that six month period. QR further developed this clause before the QCA

⁹ Refer QR’s Supplementary Submission, 1999, p.12

released its draft decision. QR adopted a test similar to ARTC's test – that is a 7 out of 12 test. QR also developed a second limb to the test in recognition of the different types of traffics on its network, and the different specification of capacity entitlements that will be developed for those traffics. Primarily, the second limb of QR's test recognised that coal train services will have their capacity entitlements defined in terms of weekly or monthly train services between nominated points. In its draft decision the QCA supported the revised provisions in QR's draft undertaking subject to the following conditions:

- When the threshold trigger (7 in 12 test) is established, QR must also be able to demonstrate a reasonable expectation of alternative demand to justify resumption;
- The threshold trigger should only have a life of 1 month;
- Access seekers should be given a right to apply for a resumption of an incumbent party's capacity entitlement; and
- Capacity resumption disputes concerning action taken by QR should be resolved quickly.

QR considered certain aspects of the QCA's recommendations problematic as set out in its response to the QCA's draft decision¹⁰. For these reasons QR does not fully accept the QCA's recommended approach, but does intend to further restrict its ability to resume capacity from the holder of access rights. In addition, QR envisages recognising in its undertaking a right, on the part of access seekers, to require QR to consider the capacity resumption process in respect of an incumbent party's access rights.

With respect to other capacity transfer mechanisms, QR notes that the ARTC undertaking makes provision for train paths to be assigned by a customer to a third party with the approval of ARTC in accordance with the assignment provisions of the access agreement in question, and notes that various issues arose with regard to the appropriate provisions that should be applicable to this in relation to QR's draft access undertaking¹¹. QR proposes to clearly specify in its undertaking the circumstances in which such capacity transfer may occur.

Therefore, whilst supportive of ARTC's approach to capacity transfer, QR would highlight that its experience has been that stakeholders have sought a greater level of detail on such matters and as a result, QR has indicated some of the additional issues that can arise regarding the allocation and transfer of capacity.

SUMMARY

- **ARTC has not provided as much detail as QR proposes in its undertaking on the provision of capacity information. In saying this, QR recognises that ARTC provides a substantial amount of detail through an informal process.**
- **QR considers there is sufficient transparency in the process that ARTC will use to assign access rights in the case of mutually exclusive rights. However, QR notes that it will specify additional detail in its undertaking with respect to this.**
- **QR's undertaking is likely to provide significantly more detail than ARTC's undertaking does in relation to the resumption and transfer of access rights.**

¹⁰ QR's Submission responding to QCA's Draft Decision on QR's Draft Undertaking, April 2001, pp.102-103

¹¹ QR's Submission responding to QCA's Draft Decision on QR's Draft Undertaking, April 2001, pp.108-111

3.7 PART 7 NETWORK TRANSIT MANAGEMENT

Are Network Management Principles clearly stipulated and likely to be well understood by operators? Are they generally conducive to efficient management of traffic movements?

The ARTC approach recognises the ‘on time’ objective of the train services operating on its network, whilst also allowing for a degree of flexibility to keep its network working efficiently as a whole. QR’s approach has small differences to ARTC’s approach, primarily due to the greater mix of traffic types operating on QR’s network. For instance, not all of the train services on parts of QR’s network have, as their primary objective, ‘on time’ running.

In the coal system, coal trains may be driven by the requirements of the ports in terms of stockpiles and/or vessel loading commitments. For this reason operators may not be primarily concerned with ‘on time’ running but rather with having a system that is flexible enough to accommodate the ports requirement for a particular sequence of coal from different mines. The operators and mines in the coal system also operate on a 24 hour day, 7 day week basis and for this reason focus on on-going availability of rollingstock. In other words it may not be worth running ‘on time’ if this results in congestion at a bottleneck in the system, and as a result delays the next scheduled service. On the other hand, passenger services have a critical requirement for ‘on time’ running. These are some of the different considerations that affect the running of these types of train services. QR has attempted to reflect these different requirements in its approach to managing the network.

QR has focused on the output of train control for each operator, rather than a generic set of rules for determining ‘how’ those outputs will be achieved. QR’s matrix provides a set of rules for specific occurrences in the day-to-day running of trains, much as ARTC’s matrix does. However, QR’s matrix also provides for deviations to be made for those rules where this is in the interests of the overall system’s efficiency. QR still has an obligation to meet operator’s contractual capacity entitlements – that is the output of the performance of train control. The access agreement of each operator will specify the consequences of QR’s failure to do this. This approach accommodates what QR perceives to be its more complicated mix of traffics, whilst at the same time recognising its primary obligation to operators in terms of the provision of train paths.

It may also be worth noting that QR has received comment in relation to its proposed matrix that more general explanation about how the matrix is to be used would be helpful. Considering QR’s matrix is considerably smaller than ARTC’s matrix this comment may also be applicable to the ARTC matrix.

SUMMARY

QR considers that its greater mix of traffic types makes its approach to network transit management favourable in Queensland. However, QR recognises that ARTC’s approach may be suitable in relation to the network managed by ARTC.

3.8 SCHEDULES – THE STANDARD ACCESS AGREEMENT

ARTC’s proposed undertaking incorporates, as separate schedules, a standard access agreement (the terms and conditions of which would be applicable to the indicative access charge), and those elements of an access agreement that are obligatory. QR is currently undertaking a process of developing its standard access agreement through in consultation with

stakeholders and, on the whole, there are many similarities between ARTC's standard access agreement and QR's proposed standard access agreement.

However, on particular matters, for legal, technical or operational reasons, there are some significant areas where QR has taken a different approach to ARTC. Where this has occurred, and where relevant, these differences are reflected as differences in the standard access agreements. Such differences have been discussed in other sections of this document and can be identified as including:

- a) Interface management - refer section 3.9 of this document
- b) Capacity management - refer section 3.5

3.9 OTHER ISSUES – INTERFACE MANAGEMENT

ARTC has taken an approach to interface risk management that varies considerably to the approach proposed by QR in its undertaking. The ARTC approach to the management of rollingstock, safety and environmental risk flowing from access to the below rail infrastructure is generally reliant upon provisions in the access agreement placing upon an operator responsibility for ensuring that it adheres to relevant laws and standards and bears the legal responsibility for the consequences of any breaches of such. To protect its legitimate business interest ARTC reserves the right to audit and suspend where it considers appropriate.

QR has based its own approach on legal and technical advice concerning QR's obligations and exposure to risk as railway manager. This advice has led to the development of a more active role for QR in its undertaking with respect to rollingstock, safety and environmental issues than that proposed by ARTC in its undertaking.

QR considers that each individual railway manager is in the best position to judge the risks and legal requirements faced by it. Therefore, QR is not in a position to comment directly upon the methodology ARTC has chosen in its particular circumstance. Similarly, QR believes that its approach is justified in its own circumstances.

SUMMARY

QR notes that significant variations exist in the way QR and ARTC manage their interface risks and associated legal responsibilities. However, QR considers that each railway manager is best placed to manage its own legal responsibilities and potential exposure to risk.