ARTC ACCESS UNDERTAKING

ARTC Response to ACCC Issues Paper

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?

- ARTC was established as a company, by the Commonwealth, in its pursuit of the Australian Transport Council (ATC) desire to pursue the following objectives, as outlined in the Inter-Governmental Agreement (IGA)[1]:
  - To significantly expand the rail industry through improved efficiency and competitiveness.
  - To increase rail's share of the interstate freight market.
  - To pursue a growth strategy for rail
  - To promote operational efficiency and uniformity on the interstate network.
- A key element of the above comprises developing or encouraging harmonious access arrangements across all of the interstate rail network, notwithstanding that parts of it are managed by organizations other than ARTC and are outside ARTC's direct control and the scope of this undertaking.
- The proposed Darwin rail link will interface with ARTC's interstate rail network at Tarcoola. The proposed network will be subject to a National Competition Council (NCC) approved regime (SA & NT) which will be in place for a period of 30 years. Whilst this regime is substantively different to ARTC's undertaking – particularly in relation to the methodology for pricing, there is no element that would prevent the two regimes from co-existing. The matter is simplified by the fact that the two rail networks are physically separate.
- To the West, the proposed Western Australian regime was not certified by the NCC due to a lack of clarity in relation to how interstate traffic, which shares the same line as intrastate traffic would be incorporated. The application by WA for approval was subsequently withdrawn. The structure of the proposed regime differs from ARTC's undertaking in so far as ARTC's reflects "open access" whereas the integrated nature of Western Australia's rail ownership means that access

[1] IGA between state Ministers of Transport, November 1997

required is of a "3rd Party" nature. However, again it should be recognized that in the first instance, ARTC's application does not propose to cover track not under its jurisdiction, and secondly there is nothing to prevent co-existence of two regimes. From previous discussions it is possible that the WA regime will be amended to reflect ARTC's undertaking where possible in order to secure future certification by the NCC.

- In New South Wales the access regime submitted by Rail Infrastructure Corporation (RIC –previously Rail Access Corporation) had previously been endorsed by the NCC for a twelve month period in order that it could be amended to align with a national interstate regime on renewal. This endorsement has since lapsed and there is currently no certified regime in place.

3.2 Part 2 Scope and Administration

Does the undertaking clearly define the relevant terms and conditions which enable a prospective operator to be sufficiently well informed before making a specific access request?

- The undertaking outlines the processes and likely timeframes necessary to give effect to an access agreement in order to access the track. This allows a prospective access seeker to clearly understand the steps and procedures necessary to obtain access. By making as much information as possible available through publication on ARTC's website, which is freely accessible by the public, ARTC aims to encourage and facilitate access requests simply and effectively.
- The inclusion of the Standard Terms and Conditions (as a guide) and publication of indicative pricing ensure that an applicant has absolute clarity in relation to the likely responsibilities and obligations of each party, and potential pricing, should they seek access to ARTC track.
- In most instances, the above information will provide an access seeker with all the information they need to make a decision in relation to access. The only outstanding issue on which total requisite information is not published relates to capacity or specific schedule availability. The Master Train Plan is not published as it is a dynamic document frequently changed and because timetable access is rarely "black and white". Most frequently an access seeker will indicate preferred timetables – and ARTC will attempt to meet that preference bearing in mind pre-existing obligations. Again, given ARTC's motivation to encourage access, ARTC will always try to accommodate an operators needs. If the specific preference of an access seeker is not available ARTC's practice is to provide alternative options and work with the access seeker to try and find an option that suits the key business needs. In essence ARTC approach has been and will continue to be one of collaboration with access seekers; ARTC has attempted to reflect this in the undertaking.
- Because the range of potential proposals is infinite, ARTC cannot reasonably publish all information relating to all inquiries that *might* be received; however it is made clear in the undertaking that ARTC will respond in a timely manner should additional information be sought or required in order to process an access request.

Is the proposed term for the undertaking appropriate given the nature of the services in question and of the industry more generally? Would a longer term be more appropriate?

- The rail industry is undergoing a range of significant changes at the current time, ranging from the restructure of state based entities such as Rail Infrastructure Corporation in NSW to complete privatization as occurred in Western Australia. Such uncertainty is not conducive to capital investment in rail by the private sector. Such uncertainty has, perceptually at least, been exacerbated by the lack a consistent national access regime. The undertaking will therefore provide some stability in an industry and environment undergoing transition in structure and form.
- The proposed term is long enough to give sufficient level of certainty to operators to evaluate the cost and benefits of actively participating in the industry. Supplier agreements generally do not appear to exceed three years and other than one bulk commodity contract, customers rarely bind themselves by contract to one operator for any length of time. Based on this, operators have sufficient flexibility to evaluate the business opportunities and undertake operations without being impacted by the term of the undertaking
- Notwithstanding the competitive nature of intermodal freight from which ARTC derives most revenue and the significant changes occurring in the industry, the terms and pricing for access are likely to be fixed for the period for a substantial part of ARTC's business. ARTC is therefore absorbing critical market risk for the term of the undertaking in order to provide certainty and encourage growth and investment.
- However ARTC recognizes that in five years the environment will have evolved and the changes arising from the current reforms will have had an opportunity to settle down. On this basis, ARTC is of the view that this will be an appropriate time-frame in which to review the undertaking in order to evaluate the effectiveness of the current undertaking and assess its suitability for the next phase of industry development.

3.3 Part 3 Negotiating for Access

Parties to Negotiation

Are the processes for the initial phase of negotiations reasonable? Are the criteria that ARTC intends to use to "screen" applicants appropriate? Do these criteria encourage potential operators to apply for access? Does the undertaking provide adequate detail on what is expected of an Accredited Operator?

- ARTC's objective in compiling its undertaking is to encourage the broadest range of applicants to consider rail as a means of transport. ARTC has therefore attempted not to exclude any genuine applicant from gaining access.
- The requirement to have Services operated by an accredited operator is a fundamental requirement under each State Rail Safety Act thus ARTC would be in breach of safety regulation to knowingly permitting non-accredited users to access the track. This is a fact access seekers should be made aware of from the outset; to pursue access contrary to this would be a waste of resources by both ARTC and the applicant.
- However, ARTC does not believe that the requirement to have only accredited operators operate services should preclude non-accredited companies from owning the rights to a path. This will allow a single purpose end user (eg BHP) to own the path and obtain train services at an efficient cost by inviting tenders for the provision of services, rather than be locked into one service provider by virtue of the fact that specific operator owns the requisite path rights.
- The fact that ARTC is not obliged to continue negotiations with an applicant who does comply with the requirements of the undertaking does not mean ARTC will not do so; in fact if ARTC believes there is a business opportunity it is in ARTC's best commercial interests to try to bring that opportunity to fruition and therefore every attempt to do so will be explored. On the other hand, ARTC should not be expected to deal with applicants who in reality do not have, or are unable to achieve, the capacity to run trains (or secure an accredited operator to run trains on their behalf).
- The requirements laid down by the undertaking are minimal and will not present any difficulty whatsoever to a genuine applicant. What they do however, is to discourage frivolous applications and new applications being made by those already in material default of an access agreement.
- The form of the Access Application merely requires that it states it is made in accordance with the undertaking. Other than that, no prescriptive form is necessary as long as it contains the detail

(specified) necessary to progress the application. This gives the applicant flexibility and is less restrictive than some alternative regimes that can reject an application if it does not exactly meet a specific prescribed format.

- Again, the publication of the ARTC Standard Terms and Conditions on the ARTC web site and as included in the undertaking, ensure that any applicant has access to full and detailed information concerning the typical obligations and responsibilities of both ARTC and the applicant in entering into an access agreement.

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?

- The Indicative Access Proposal sets out amongst other things :
    - Whether capacity to accommodate the requests already exists
    - Additional works and an estimate of the order of cost should additional capacity be required
    - Whether or not there is a conflicting request
    - An estimate of the likely charges (or additional information required to estimate likely charges)
    - An indicative train path
- In ARTC's experience this is the key information required by operators in order to evaluate the potential viability of commencing a new train service . With this information an operator can evaluate the feasibility and indicative costs associated with the service and whether or not it is worth pursuing further. It also provides the foundation for detailed discussion with ARTC on any aspect of the proposal. These are most frequently iterative discussions around a range of options rather than simply a 'yes / no' to a single proposition.
- Again, it is worth noting that ARTC seeks to encourage access and therefore will attempt to support prospective operators in reaching a conclusion.

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 the access seeker?

- ARTC has endeavoured to create a negotiation process that can accommodate a broad range of circumstances from simple acceptance of Standard Terms and Conditions, negotiation of modified Terms & Conditions, rejection or withdrawal of the application by the Applicant to changed Capacity availability.
- The process has deliberately been kept open to encourage resolution of access applications, however for practical purposes it is necessary to provide for cessation of negotiations to give closure to applications which cannot be developed further.
- The process allows each party to seek additional information and time to deliberate issues. The timeframes for the negotiation period can be extended by mutual agreement if discussions are proceeding to the satisfaction of both parties.

Dispute Resolution

Are the dispute resolution processes reasonable, appropriate and adequate? Does the undertaking clearly describe the various stages of the processes 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 jurisdictions of the dispute resolution bodies appropriate and clearly defined? Are the enforcement mechanisms adequate and clearly defined?

Are the time frames involved at each stage of the process of an appropriate length? Does the overall approach balance between the need for timeliness, on the one hand, and efficient and fair outcomes on the other?

- The dispute resolution process contained within the undertaking has been drafted taking into consideration the comments expressed by operators during the extensive negotiation of existing track access agreements.
- In the past, operators have stipulated that a dispute resolution should have the following characteristics:
    - It should be hierarchical, commencing with attempts by the the parties themselves to resolve specific issues.
    - It should be inexpensive
    - It should be quick /timely
    - The use of lawyers and the legal system should be avoided where possible.

- On the basis of the above, the 'negotiate, mediate, arbitrate' process has been applied as a mechanism for achieving a process with the above features. A dispute in relation to the undertaking or in relation to the negotiation of access as per the undertaking may be referred to dispute resolution process as detailed at clause 3.11 of the undertaking.
- The process allows a number of opportunities for resolution or escalation meeting the requirement by operators that the process should be hierarchical and cost effective.
- The undertaking clearly outlines the scope of each level of resolution and provides guidelines for how it should be carried out including how appointments should be made, costs are to be borne and guidance for independent mediators and arbitrators (ref 3.11.4(vi)).
- On the basis of the above, ARTC is of the view that the dispute resolution process is entirely reasonable, adequate and appropriate for dealing with disputes in relation to access or the undertaking. It should be noted once again that once an access agreement is executed, any dispute in relation to that agreement will be dealt with by the dispute resolution mechanism contained within the agreement.
- The total time frame for resolution of a dispute could ostensibly be

o	Negotiation Advice	7	(to meet)
o	Negotiation period	21	(to resolve)
o	CEO Negotiation	14	(to resolve)
o	Appointment of Mediator	14	(to appoint)
o	Negotiation period	30	(to resolve)
o	Appointment of Arbitrator	14	(to appoint)
	Total time elapse	100 days	

- Whilst the potential time which may elapse before an arbitrator is appointed may seem a long time, it should be borne in mind that this is a "worst case" scenario which will only occur as a last resort. ARTC recognizes that commercial issues often cannot wait for a lengthy, drawn out process to be enacted in order to reach an outcome. It is hoped that most disputes could be resolved long before it becomes necessary to appoint an arbitrator. Further, it is still probably much quicker than institution and completion of legal proceedings.

- In relation to enforceability, at each level of dispute resolution the outcome is either (i) that the parties agree and the issue is resolved or (ii) it is escalated to the next level. At its highest, an independent arbitrator, following the guidelines laid down in clause 3.11.4, will make a decision which will, in the absence of manifest error, be final and binding on both parties (see clause 3.11.4.(vii)).
- The issues paper suggests that there is a trade off between the need for timeliness and the need for efficient and fair outcomes, and asks whether the correct balance is achieved through the proposed mechanism to be adopted by ARTC. It is ARTC's view that one need not be compromised at the expense of the other, and the process outlined in the undertaking effectively achieves a fair outcome through the use of independent parties, and a realistic timetable that allows for deliberation of the issues but avoids unnecessary delay of a resolution.

3.4 Part 4 Pricing Principles

Does the general approach to access pricing achieve the stated objective of striking a balance between the business interests of ARTC, access seekers and the general public?

ARTC is of the view that the pricing principles are generally balanced in favour of the access seeker. ARTC pricing principles have been developed in order to give specific credence to the objectives of the Inter Government Agreement as well as the consequently stated aims of the company being:

- To significantly expand the rail industry through improved efficiency and competitiveness.
- To increase rail's share of the interstate freight market.
- To pursue a growth strategy for rail
- To promote operational efficiency and uniformity on the interstate network.

as well as other objectives relating to the operation of the company on commercially sound principles, and improving interstate rail infrastructure through better asset management and a program of commercial and grant funded investment.

Essentially, ARTC manages an asset that is significantly under-utilised in various parts and at various times. As such, the volumes currently available in the market will not generate sufficient revenue to recover the full economic cost of the asset where access is charged so as to make rail inter-modally competitive. Given this spare capacity, and the constraint placed on pricing by intermodal competition, ARTC sees growth in volumes as the primary means by which the asset can become sustainable in the long term. In the shorter term, however, it is essential that sufficient revenue be generated to cover incremental cost. ARTC understands that, in order to price access in a way that makes rail competitive, it must take some long term commercial risk, which it is seeking to mitigate by growing its markets and revenues.

Specific features of ARTC's pricing policy designed to promote market growth through the encouragement of competition, resulting in wider community benefits, include:

- Operators competing in the same market environment and operating under like terms and conditions of access are not price differentiated.
- Indicative Charges and Terms and Conditions are published, as well as any prices associated with deviations from the Indicative Terms and Conditions, provide prospective users with guidance, and some certainty, with respect to access pricing.

- ARTC charges are levied in two parts, being a variable usage related charge and a fixed flagfall charge. The relativity of charges results in revenue collected from the fixed flagfall charge being only around 33% of total revenue. In addition, the flagfall component is only 'fixed' to the extent that the path exists. The only risk to the operator is that if the path is not sufficiently utilised, it may be withdrawn. The operator makes no long term, up-front payment that is forfeited if the market does not enable the path to be fully utilised. A recent cost study[2] estimated that for concrete sleepered track carrying between 5-10MGTpa (similar to most of the ARTC network) maintenance cost variability is between 20-30% (around 10% higher for similar timber sleepered track). Given this, ARTC is taking further market risk in order to strike a fair balance in the market place between the interests of incumbent users and the encouragement of new entrants. Within the fixed cost (flagfall) framework, ARTC facilitates some flexibility for operators to cater for market need by permitting an agreed number of annual cancellations before take or pay provisions are activated.
- Infrastructure maintenance and capital expenditure represents a significant component of floor and ceiling revenue limits. Infrastructure maintenance is currently outsourced and managed under maintenance contracts entered into on commercial terms as a result of a competitive tender process. ARTC has adopted this practice with a view to ensuring that its cost structure reflects efficient infrastructure maintenance practice, and access pricing is efficient and competitive. ARTC's infrastructure asset base valuation similarly reflects an optimised network so as to ensure that revenue collected does not inefficiently recover the costs of redundant assets. Train control unit costs are also well below current industry average (notwithstanding variations in the signalling/communications systems employed throughout the industry) and compare favourably with what might be considered best practice. Comparative tables demonstrating these points have been provided in the application to the ACCC.
- Under the undertaking, ARTC is able to annually increase the Indicative Access Charge by the greater of CPI less 2% and 2/3rds of CPI. This implies an annual real reduction in access pricing of up to 2% may be made available to users, as well as the possibility that pricing may not be increased at all, offering the possibility of even greater real reductions to users. Anecdotal evidence suggests that the long-term trend in interstate road pricing is a real annual reduction of around 2%. Since separation of the above and below rail elements on the Commonwealth owned portion of the interstate network, access pricing on these corridors under the management of ARTC and its predecessor has fallen around 13% in real

[2] Queensland Competition Authority, 'Draft Decision on QR's Draft Undertaking', December 2000. Working Paper 2 – Usage-related infrastructure maintenance costs in railways.

terms, an annual real fall of about 2-2.5%. This has been achieved in an unregulated but competitive environment.

- In addition to real falls in access pricing, strategic investment in the infrastructure, together with improved asset management practices at lower unit cost, has given users the opportunity to make significant yield improvements in above rail operations. Capacity and service levels can be increased by either investing in the asset or by making the existing asset work harder (sweat) by safely extending the engineering specification of the asset. The latter approach can result in higher unit cost, but by reducing such costs, user benefits are magnified. In addition, ARTC's policy to apply access charges in two parts (variable and fixed) provides incentive to users to utilise this additional capacity to further reduce effective access charges. Making greater use of a given path and so spreading the fixed charge for the path over a greater volume of business effectively does this. This has been achieved by the operation of longer trains as corridor length limits are increased, increasing wagon loading (whilst still maintaining service performance levels) and better train loading. ARTC estimates that improvements in above rail operations as described above is having the effect of reducing the cost of access by around 1.2%pa (for intermodal services), in addition to the real reductions in access prices described above. It should be noted that this benefit extracted by users of the network as a result of increased operational limits through investment and asset sweating correspondingly reduces below rail unit revenues. This is often balanced by the volume growth brought about by the corresponding improvement in rail's cost and price competitiveness.

Are the definitions of "floor" and "ceiling" revenues appropriate? Are ceiling revenues defined in such a way that ARTC cannot exercise market power?

ARTC has proposed to apply what might be termed 'combinatorial' floor and ceiling tests to the revenue it could extract from the network. That is, prices must be such that the total revenue extracted from a segment or group of segments on the network must be no less than the incremental cost (costs avoided if the segment or group of segments were removed from the network), nor greater than the full economic costs of the segment or group of segments.

A similar test is used in most other existing rail regimes in Australia. Some regimes also apply what is termed a 'stand-alone' revenue test, where revenue extracted with respect to any particular service must be no less than the incremental cost and no more than the full economic cost associated with the use of the network by the service on a stand-alone basis. This test is

designed to ensure that some businesses on a segment are not paying so much as to be effectively 'cross-subsidising' businesses which are sharing the segment but not meeting their costs of access. The test is particularly relevant to operations on the coal networks in NSW and Queensland.

On ARTC's network, where most segments are utilised by a number of similarly priced services the stand-alone test serves little purpose, and in most cases results in a higher price being acceptable by any particular business as long as lower prices are applied to other business so as not to breach a combinatorial ceiling.

The undertaking allows for revenues to be higher than the ceiling limit, or lower than the floor limit, but only where agreed by the operators or ARTC respectively.

The floor limit for revenues on a segment is the cost that would be avoided if the segment (or group of segments) were removed from the network. ARTC considers that the cost which could reasonably be avoided in such a situation include:

- Between 75% and 100% of direct and allocated infrastructure maintenance contract cost (depending on the significance of the segment). For less significant segments, common costs (equipment, supervision) are not avoidable.
- Between 0% and 50% of allocated contract management and administration costs (depending on the significance of the segment). For less significant segments, any rationalisation in this area is not warranted.
- Train control expenditure is considered avoidable to the extent that the train control function could be rationalised. Closure of more significant segments (to which at least one train control board is dedicated) could reasonably result in the avoidance of nearly 100% of allocated expenditure. On the other hand, closure of less significant segments (which share a board with other segments) reasonably might not result in the avoidance of any allocated expenditure, although board rationalisation opportunities have been considered.
- Between 0 and 50% of allocated train planning and administration expenditure, on a similar basis to train control, but by the nature and extent of the planning function less opportunity to rationalise is available.
- Between 0 and 50% of allocated system management and administration expenditure (depending on the significance of the segment). Generally unavoidable with respect to marginal segments, but the impact of the loss of major segments on business would necessitate some rationalisation in this area.
- Depreciation and a return on relevant assets are excluded from the floor revenue limit.

Except in exceptional circumstances (short term opportunities), any consideration of pricing a particular business at less than a level that, if a similar level of pricing where applied to all users, would not generate sufficient revenue to recover incremental cost as described above, would render the segment unsustainable. Given other features of ARTC's pricing policy (indicative charges, non-discriminatory pricing) it is likely that the offer of a lower price to a particular business would ultimately see all business on the segment priced at a similar level.

The ceiling limit for a segment is the full economic cost of the segment (or group of segments). The full economic cost of a segment consists of:

- Costs specific to a segment (including depreciation and a return on segment specific assets)
- Costs of additional capacity
- An allocation of non-segment specific costs (including depreciation and a return on non-segment specific assets)

A portion of infrastructure maintenance expenditure has been directly identified with segments. As information systems improve over time, this portion could be expected to increase. Depreciation and return are also directly identified with segments. Remaining maintenance expenditure as well as contract management, train control, operations management and system management have been allocated to segments in accordance with the cost allocation rules identified in the undertaking.

The floor and ceiling revenues are effectively set so as to ensure more profitable parts of the network do not 'cross-subsidise' unprofitable parts. In other words, revenues would be maintained so as to lie between the floor and ceiling limits on any segment. The attached graphs of floor and ceiling revenue limits determined for each of ARTC's segments demonstrates that, in most cases, revenue extracted lies between the limits. This is certainly the case on ARTC's key 'trunk' segments between Albury/Broken Hill and Parkeston. As such, ARTC considers that there is no cross-subsidisation between parts of its network.

The segments on the Melbourne – Parkeston corridor show revenues to be around 50% over floor limit and about 50% of ceiling limit. A large part of this revenue is derived from business priced at the Indicative Access Charge. This business is highly competitive with road and the Indicative Access Charge reflects access pricing which enables rail to effectively compete with road. Rail volume and market share between Melbourne and Perth has increased significantly over the past five years demonstrating some success in this regard. ARTC is seeking to increase revenues on this corridor to approach ceiling limit through further volume growth.

Revenue extracted on ARTC's other key segment between Melbourne and Albury (competing with road on the main north-south corridor) barely covers the floor limit and is only around 40% of the ceiling limit. This is a reflection

of the fact that rail finds it more difficult to compete with road service offered on the shorter Melbourne-Sydney/ Brisbane routes. Rail freight pricing, needs to be low in order for rail to become attractive on these corridors. Even at this level, rail has continued to struggle on this corridor with evidence supporting a falling market share over time. It is generally accepted that significant investment in this corridor (both on and off ARTC's network) will be necessary for rail to be a strong competitor on these routes.

The graphs also demonstrate that other minor segments on the network are only marginal, with the Crystal Brook to Broken Hill, and Pt Augusta to Whyalla, segment revenue just exceeding floor limits. The Dry Creek to Outer Harbour segment (in the Adelaide metropolitan area) currently fails to generate enough revenue to meet the floor limit, but is considered to be an important part of the Melbourne – Adelaide – Perth route.

The nature of ARTC's business (where significant intermodal competition exists in ARTC's downstream business) does not permit ARTC to have 'market power' despite it controlling a monopoly asset with respect to some customers. In addition, ARTC's objective to grow the rail freight market is contradictory to the use and abuse of market power. ARTC considers that the definition of ceiling revenue limits as proposed has little bearing on the commercial negotiation of access pricing in such an instance. The ceiling limits serve more as revenue targets for future market growth.

Nevertheless, ARTC considers that the use of market power is not contrary to the efficiency of a market process, so long as such use does not create undesirable distortions in related upstream and downstream markets. The use of market power in the latter way could more appropriately be termed 'abuse'.

Do the 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?

Key incentives to promote the economically efficient use of the asset by operators are embedded in equitable two part pricing. This encourages clean (even playing field) above rail competition, and maximum path utilisation to minimise the cost of access. This has been described earlier. Further, CPI-X price escalation encourages efficient maintenance and productivity improvement beyond X. Use of DORC only allows efficient investment to be recovered through access revenue. In order to encourage both efficient investment and maintenance, it is important that the DORC valuation recognises capacity enhancements (in terms of both volume and service

levels) that are brought about by safely extending the engineering specification of the asset without increased unit maintenance cost. Without such recognition in asset value, there is incentive for the infrastructure operator to merely maintain current work practices and invest (either of which may be inefficient) to increase capacity. The cost of investment can only be recovered through growth or an increase in pricing supported by the deviation of the service characteristics away from indicative characteristics, or a regulatory change in the price where justified on change in market position.

Whether or not prices are directly linked to costs, the inability of the access provider to achieve full CPI escalation (with any productivity allowance) means that the provider has incentive to seek greater efficiencies and reduce costs over time. The contestable nature of infrastructure maintenance provides incentive to providers to achieve the same cost efficiencies over time. As described above, these characteristics have naturally occurred over the past five years as a result of competitive pressures placed on rail, and ARTC's approach to pricing and market growth, without regulatory pressure.

What is the likely effect of the proposed approach to access pricing on intra and inter modal competition? Are there any elements that could hinder competition?

Intermodal Competition

ARTC draws its revenue from train operations serving a number of end markets with the majors ones being:

- Freight forwarders containers – national and intrastate movement
- Overseas shipping containers – national movements between ports
- Steel – national movements between ports and major production facilities
- Bimodal – national movements
- Grain – between inland storage locations and ports in Victoria and South Australia
- Ore concentrates – between Broken Hill and Pt Pirie

Road and sea transport form strong competition to rail in each of these markets to varying extents. In all of these markets, access price negotiation must consider the competitive position of rail in these end markets. Both ARTC and the operator lose revenue if rail is unable to compete in the markets.

For this reason, ARTC has endeavoured to tailor its approach to pricing to facilitate the growth of rail volume in these markets, whilst still retaining as much flexibility for commercial negotiation as possible. Characteristics of

ARTC's approach to pricing which are designed to foster intermodal competition (some have been discussed previously) are:

- **Market based Indicative Access Charge**. Currently around 60% of ARTC business is priced at the Indicative Access Charge. This business includes most containerised freight that is characterised by a high level of intermodal competition. The Indicative Access Charge was originally struck in 1995 as a result of commercial negotiations between ARTC and the operators in this market at the time. This resulted in pricing (on ARTC owned territory) which enable rail to compete effectively in east west markets. With respect to ARTC leased track in Victoria, pricing inherited by ARTC from the previous track owner in that state, considered to favour some operators over others to the detriment of intramodal competition, was adjusted to become more equitable, but without altering the overall level of pricing so as to adversely impact the competitive position of rail in any of its markets.
- **Deviations around the Indicative Access Charge**. ARTC has proposed to apply the Indicative Access Charge to any service, which operates under the Indicative Terms and Conditions. Where a service operates under different conditions, factors which ARTC will take into account in formulating a varied charge include the particular characteristics of the service, the commercial and logistical impacts on ARTC's business, any contributions made by the operator and the cost of any additional capacity required to operate the service. ARTC will not consider the identity or characteristics of the operator of the service. ARTC considers it important not to be too prescriptive in price setting at other than the Indicative Access Charge. The needs of operators can vary widely and maintenance of a flexible approach could be beneficial in this regard. ARTC considers that its open and equitable approach to pricing will promote a healthy intramodal competition in most of these markets and in so doing, assist rail's competitive position in markets where there is strong intermodal competition. This is precisely what has happened in the intermodal freight market between the eastern states and WA, where the advent of healthy intramodal competition arising with the entry of new operators, has resulted in significant falls in freight rates and improved service levels. This has improved rail's competitive position in the east west intermodal land freight market, where its share has increased from around 60% to 70%. This trend in rail market share has not occurred on the routes between Melbourne and Brisbane where the interstate intermodal freight market is still dominated by one operator.
- **Any price escalation is to make allowance for a reasonable productivity improvement** in the provision of below rail infrastructure services. It has been stated earlier that road freight rates in interstate markets have fallen have fallen by an average of around 2% pa in real

terms as a result of productivity gains in that industry. In order to maintain rail's competitive position over time, real access pricing on ARTC territory have fallen by around 2.5% annually over the last five years. This has occurred because ARTC has not applied any annual price increase during this period and, in fact, reduced pricing by an average 1.7% in 1998. This has occurred without regulatory pressure. ARTC has proposed to retain the right to annually increase pricing which, if exercised, may bring about an adjustment of CPI-2% or 2/3rds CPI (whichever is the greatest).

- The **structure of ARTC's charges**, as described above, provide incentive for operators to improve yield from both their own above rail assets, as well as from usage of the track. Such improvements further enables rail to improve its competitive position with respect to road and sea. The relativity of fixed and variable costs has also been set at such a level (around 30% fixed, 70% variable) so as to reduce the barrier for entry to the network, so encouraging intramodal competition and increasing rail competitiveness.

Intramodal Competition

On ARTC's territory, strong intramodal competition exists in two main areas. Between Melbourne and Perth, the movement of freight forwarder and overseas containers represents a significant proportion of ARTC revenue, and is currently carried by four main operators competing in various market segments on this corridor. In Victoria, three different operators compete for the movement of grain from inland silos in the western regions of Victoria and the southern regions of New South Wales to ports in the south of Victoria.

Most of the characteristics of ARTC's approach to pricing as described above, serve equally to promote intramodal competition in these areas. In particular, ARTC's approach is to provide and open and equitable pricing regime in order to encourage the entry into markets of newer operators. Such operators can enter the market with confidence that they will be able to compete on an even playing field with incumbent carriers, and certainty as to the level of access pricing which will be made available to them.

Does the Indicative Access Charge provide a reasonable basis for the setting of indicative access prices? Is there sufficient clarity about how ARTC will deal with deviations from the Indicative Access Charge?

The Indicative Access Charge currently applies to business that generates around 60% of ARTC's total revenue. In the five years since open access has applied to the network, the majority of new entrants into the market and new business has come from operations to which the Indicative Access Charge

applies. ARTC is expecting this trend to continue in the future, and also expects most natural growth in its business to be generated in the interstate intermodal freight market. To this end, ARTC would expect that the proportion of business to which the Indicative Access Charge applies would increase in the future.

ARTC also recognises that operators in different market segments have different needs with respect to efficient above rail operations and competitive position. Where an operator's requirements differ from the Indicative Terms and Conditions, ARTC proposes to formulate an access charge that considers a range of factors including the particular characteristics of the relevant service, the commercial and logistical impact on ARTC's business, the cost of any additional capacity required, and any contribution made by the operator. It is difficult to ascertain in advance as to exactly how the various factors will be applied, and what weighting may be placed on each factor. This is because of the wide range of different requirements that may be presented in a business proposal. ARTC considers that flexibility is an important element in this process.

In order to provide additional certainty to operators seeking terms and conditions other than the Indicative Terms and Conditions, ARTC has proposed to publish any negotiated access prices, together with related terms and conditions on its website. The purpose of this is to provide additional guidance to prospective operators as to how their requirements might be priced. ARTC would expect that, over time, a higher incidence of situations where specific requirements have either been exactly or closely handled in previous negotiations, reducing uncertainty for new applicants considerably. To date, ARTC (and its predecessor) has only once introduced a new access charge on an existing segment. All other pricing of access has been at the Indicative Access Charge or at another existing published rate.

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

The relativity of the fixed and variable component of access charges has resulted in revenue from the fixed charge representing around 30% of total revenue. In addition, the flagfall component is only 'fixed' in the short term to the extent that the path exists. The only risk to the operator is that if the path is not sufficiently utilised, it may be withdrawn. The operator makes no long term, up-front payment that is forfeited if the market does not enable the path to be fully utilised.

As stated earlier, ARTC is of the view that the above relativity of fixed and variable charges places additional market risk on ARTC, given that it is

generally accepted that a significant proportion of rail infrastructure costs is fixed. ARTC has taken this market risk in order to recognise its objective to grow rail market share. ARTC sees the encouragement of intramodal competition as a catalyst for increasing market share (as demonstrated on the routes between the eastern states and WA). In reducing the relativity of fixed charges for access, a potential barrier to entry to the network is reduced. ARTC sees any resulting market growth as mitigating the commercial risk ARTC is taking in following this approach.

Where possible, ARTC seeks to attribute as much expenditure to specific pricing segments as possible. ARTC has sought to allocate other costs using methods commonly employed in the rail industry. It has sought to allocate costs so that any operator pays a fair share of expenses which reflect the costs incurred by its operation. Unattributable infrastructure maintenance expenditure has been allocated 60% with respect to GTKs and 40% with respect to track kilometres. This has been done so as to recognise that an element of maintenance expenditure is dependent upon the volumes carried on the track, whilst another element is more time based. Such a split is not uncommon in the industry. As much of ARTC's network is relatively homogenous in material and configuration, an allocation on the basis of track kilometres has been considered fair and cost reflective.

All other operations and management expenditure has been allocated on the basis of train kilometres. This is considered reasonable in the most of this expenditure is incurred in the management and control of train paths. The extent of effort involved is generally not dependent upon the mass of the train using the train path. For this reason, ARTC has chosen not to allocate this expenditure on the basis of GTK's as is done in some regimes. This would be more appropriate for a vertically integrated railway where the product is freight on a train rather than a train path. In any event, the differential between these methodologies is not substantial.

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?

Included in ARTC's application is a report resulting from an independent assessment of ARTC's Weighted Average Cost of Capital (WACC) by investment banking consultants, Equity & Advisory (E&A). E&A have utilised the Capital Asset Pricing Model (CAPM) in order to establish WACC.

Whilst none of the available models are generally considered 'perfect' in all regards, CAPM has been widely favoured for the evaluation of WACC by regulatory authorities in Australia. CAPM is particularly suited in this regard because of its ease of use and transparency.

ARTC is of the view that the mid-range assessment made by E&A of ARTC's WACC has under-estimated the ARTC's cost of capital in that the assessment has not fully addressed the market risk faced by the company. ARTC operates in a commercial environment where strong intermodal competition exists in almost all markets and such markets are closely linked to economic activity. The WACC noted in the recent regulatory assessments in the rail sector are generally similar to that assessed by E&A. Regulatory WACC assessments in the rail sector have been made with respect to the infrastructure owners as described in Table 1.

Table 1 Regulatory Rail WACC Assessments

Operator	*Regulatory Assessment by..*	*Date*	*WACC*
Rail Infrastructure Corporation	IPART	April 1999	8% real,pre-tax (Hunter Valley Coal)
Queensland Rail	QCA	December 2000 (Draft Decision)	8.36% nominal,post-tax 6.8% real, pre-tax Coal assets only
Westrail Freight	NCC	September 1999 (Draft Decision)	8.2% real, pre-tax
Freight Australia	DOIVIC		R_f+(4-10%)– currently 9.5%-15.5% on new CAPEX only
Australasia Railway Corporation	NCC		N / A
ARTC			7.2% nominal, post-tax (midpt) 7.5% real, pre-tax (midpt)

The dominant business with respect to operations where a regulatory WACC determination has been made is bulk freight (coal & minerals, ores, grains etc). Such businesses are not subject to the same strong intermodal competition as ARTC's dominant businesses. The use of rail with respect to coal movements is often contractually mandated, or rail has a clear economic advantage (end users have made financial commitment to supporting infrastructure). Whilst bulk commodities do face some inherent risks (price risk, climate), volumes are generally reasonably reliable. A credit assessment carried out by Access Economics[3] with respect to QR's below rail coal business found the risk profile to be 'above average to excellent

[3] Queensland Competition Authority, 'Draft Decision on QR's Draft Access Undertaking', December 2000. Working Paper 4 – The Estimation of Queensland Rail's Below Rail Coal Network Expected Rate of Return.

compared to the business of QR's Network Access as a whole'. This 'reflected its low risk as a natural monopoly business and the stability of its revenues given stable growth and a very low volume and price volatility to which it is exposed'. ARTC would expect the movement of agricultural products (facing both price and climate risk) to be more volatile than coal and minerals business. Whilst some bulk freights (grains, ore concentrates) are moved on ARTC territory, dominant businesses moved are subject to both economic risk and the risk of strong intermodal competition, where inter-modal switching costs are not high. In addition, ARTC is directly exposed to these risks by virtue of its approach to pricing, described earlier. ARTC's also has relatively few direct customers, where seven major operators account for approximately 91% of business. Its major customer National Rail and another smaller customer FreightCorp are expected to be privatised within the next 12 months. ARTC expects that a new commercial operator could seek to rationalise unprofitable operations and improve operating efficiency generally, further increasing revenue risk to ARTC.

It can be seen from the table that WACC with respect to the movement of single bulk traffics (coal) lies at around 7-8% (real, pre-tax). Business on the WA freight network, although more mixed, is still dominated by bulk movements such as alumina, bauxite, caustic, coal, iron ore, nickel concentrates and grain. Local general freights and the interstate freight task are also included. The recommended WACC in that case was considered to be slightly higher at 8.2% (real, pre-tax), which was at the high limit of the estimated WACC range proposed in this instance. New capital invested with respect to the branchline network in Victoria is clearly exposed to the grain industry. A WACC of between 9.5% and 15.5% has been assessed in this instance, although it is not clear as to the terms (real / nominal, pre / post-tax). Given the above evidence, ARTC would consider that E&A's assessment of WACC (7.2% nominal, post-tax based on the midpoint of the WACC range) fails to recognise the different business and commercial risks faced by ARTC.

Table 2 shows a comparison of components used in recent regulatory rail WACC assessments, and a calculation of plain 'vanilla' WACC in each case. Plain vanilla WACC is the simplest (and most transparent) form of WACC calculation, simply applying an organisation's financial structure to its cost of debt and equity respectively. Such a WACC implies that tax and imputation have been incorporated in the organisation's cash flows. As can be seen from Table 1, WACC is usually calculated on some other basis as deemed appropriate is specific circumstances. To assist in the comparison, certain components that are not dependent on the factors related to the entity, but are more time dependent, have been equalised. Such factors include the statutory tax rate assumed, the nominal risk free rate and the long-term inflation rate.

Table 2 Regulatory Rail WACC Comparison

Operator	*Rail Infrastructure Corporation*	*Queensland Rail*	*Westrail*	*ARTC assessment*
Date	April 1999	December 2000	September 1999	February 2001
Activity	Coal	Coal	Bulk Some General Some Intermodal	General Intermodal Some Bulk
Tax Rate	30%	30%	30%	30%
Gamma	40%	50%	40%	45%
Gearing	55%	55%	50%	45%
Nominal Risk free rate	5.5%	5.5%	5.5%	5.5
Real Risk free rate	2.93%	2.93%	2.93%	2.93%
Market Risk Premium	5.5%	6.0%	6.0%	5.75%
Equity Beta	0.85	0.76	1.00	0.95
Debt Premium	1.0%	1.2%	1.3%	1.2%
Real Debt Cost	**3.93%**	**4.13%**	**4.23%**	**4.13%**
Real post-tax return on equity	**7.60%**	**7.49%**	**8.93%**	**8.39%**
Long Term Inflation Rate	2.5%	2.5%	2.5%	2.5%
Vanilla Post Tax WACC	**5.58%**	**5.64%**	**6.58%**	**6.47%**

It is assumed, for comparison purposes, that tax and imputation would be factored into cashflows in each case, and therefore are not relevant to the WACC calculation. Plain vanilla WACC formula is $(E/V)R_e + (D/V)R_d$.

Components considered external to the respective entity (Statutory Tax Rate, Nominal Risk Free Rate, Long Term Inflation Rate) have been equalised so as to isolate differential between assumptions based on internal factors.

Where relevant, a midpoint of any range as may be assessed by the regulator has been used.

The table illustrates that, by and large, the assumptions made by E&A with respect to the various parameters incorporated in the WACC calculation are reasonable. The widest variation would appear to be in the following components, each of which impact significantly in the final WACC calculation:

- **Gearing** – E&A have assumed an optimal gearing level for ARTC of 45% (mid point) compared to assumed optimal gearing of 50-55% with respect to other rail infrastructure operators. This has been done to recognise the higher commercial risks faced by ARTC compared to those facing the regulated business of other operators as described above.

- **Equity Beta** – The equity beta is assessed by E&A as being appropriate to ARTC's business (0.95) is higher than those used with respect to the regulated coal businesses of other operators (0.76-0.85) but lower than the mixed, but bulk commodity dominated freight business in WA. Given the highly competitive nature of most of ARTC's business, and linkage to overall domestic economic activity, compared to the regulated business of other operators, many of which are well placed in diversified international markets, ARTC considers an equity beta higher than that considered reasonable to other rail regulated businesses, to be appropriate. In addition, ARTC has taken on higher exposure to such risks brought about by its approach to pricing, which is weighted towards market growth, as described earlier.

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?

A number of previous regulatory publications including those published by the ACCC, have concluded that there are a number of methodologies available to value assets for regulatory purposes, each of which have certain advantages and disadvantages and should generally be considered in the specific circumstances surrounding the asset base to be regulated. In broad terms, current methodologies fall into 2 categories, value based methodologies and cost based methodologies.

Value based methodologies, which seek to base asset value on the income which the assets could generate (future revenue or sale proceeds) have generally been considered inappropriate for regulation both in the rail sector and other industries. These methodologies suffer from the major drawback of circularity. Infrastructure operators are able to set prices with market power, then such prices influence future income and, so the asset value.

Cost based methodologies include historical cost based valuation, reproduction cost based valuation and replacement cost based valuation. **Historical cost valuation methodologies** equate asset value to original purchase cost, which can then be adjusted for inflation and depreciation in order to become more relevant in a current context. The advantage of historical cost based methodologies is that they are less subjective, if sufficient historical detail is available, and so more transparent. The disadvantage of such methodologies is that they can create an environment conducive to inefficient investment, in that investments in higher cost assets will result in a higher asset base and the potential for higher pricing. To mitigate such risks,

regulatory intervention may be required in the investment decision making processes of the infrastructure operator, adding unnecessary cost and risk to the industry. A further disadvantage is that to merely inflate the original cost of older assets would tend to ignore technological and construction productivity improvements which may have occurred over the period, as well as the existence of surplus assets. As a result, it is possible that an inflated historical cost valuation may be higher than, say, a reproduction or replacement cost valuation as described below, resulting in inefficient outcomes.

Reproduction cost based methodologies rely on the costs of reproducing the existing assets using the same technology and scale. ARTC does not consider such approaches as being appropriate. In a commercial market environment, an infrastructure operator would be most unlikely to reproduce an older asset base using existent technology and materials. Significant aspects of the network, whilst still serviceable, involve outdated technologies, specifications and materials which are unlikely to be able to cater for future growth and service needs. This is despite the fact that the rail infrastructure industry is relatively slow moving in a technology sense. ARTC considers it unlikely that the asset base, as it currently stands, would be sufficient to meet medium to long-term capacity and service demands. Certain components in the asset base are no longer commercially available.

Replacement cost based methodologies involve identifying the current cost of replacing older assets with modern assets able to provide equivalent services in terms of quality and quantity. The asset base can be depreciated for loss of service potential in terms of asset life. The asset base can also be optimised so as to adjust for assets that are in excess of service capacity potential, including gold plating. Where these adjustments have been made, a depreciated optimised replacement cost (DORC) valuation results. Benefits of such methodologies are that they address any concerns about the scope to over-capitalise (where investment is made in gold-plating the asset, and in assets where newer technology might result in a lower cost of replacement). Such investment, together with redundant or excessive assets can be optimised out of the regulatory asset base. Optimisation seeks to establish the cost of the most efficient method of providing the service potential of the current asset, rather than the cost of replacing the physical asset base. The major disadvantages of such an approach are that they can be administratively more difficult and less transparent. To mitigate against possible uncertainty risk, it is important that a degree of independence and transparency be observable in the valuation methodology.

Despite these disadvantages, such methodologies are seen to result in an inherently more efficient access outcome by removing excessive cost of access and providing incentives for efficient investment in infrastructure. Most previous regulation of rail business in Australia has favoured the DORC approach (or close derivations thereof) for this reason.

ARTC is of the view that the DORC methodology is appropriate in the case of its infrastructure assets. Compared to other methodologies, a major advantage of DORC is that it replicates the asset valuation outcome in a competitive market. In particular, it provides a disincentive to the infrastructure operator to 'gold plate' its asset base by not allowing redundant or excessive assets and technologies to be included in the asset base (an efficient outcome which would result in a competitive market). In addition to adjustments for depreciation and optimisation, ARTC supports the requirement that the valuation should be 'forward looking'. That is, rather than considering only the current demand for capacity, the optimised replacement base should take into consideration reasonably forecasted demand for the infrastructure with respect to volumes, service levels and performance. This 'forward looking' adjustment has been incorporated in several regulated rail businesses to date.

It has been stated earlier that the current level of revenues extracted by ARTC from its asset base fall well short of that required to recover economic cost. In the medium term, ceiling revenue limits act more so as revenue targets, consistent with those that a commercial organisation seeking long-term viability would have. ARTC is unable to achieve these targets by setting access pricing in markets where intermodal competition will not enable it to do so. The long-term viability (replacement) of the network is likely to only be achievable on a commercial basis through significant growth in rail volumes.

A further benefit seen by ARTC is that such an approach would result in some consistency in regulatory asset valuation throughout Australia. This will benefit the interstate rail freight industry, which represents a dominant portion of ARTC business.

In order to address the perceived disadvantages of the DORC approach as described earlier, ARTC is seeking to establish an independent, transparent valuation approach and outcome as part of its application. The report 'ARTC Standard Gauge Rail Network DORC' prepared by independent transport economics consulting group Booz Allen & Hamilton (BAH) has been included in documentation supporting the undertaking application. This has been done to reduce uncertainty and any lack of transparency surrounding the calculation of revenue floor and ceiling limits. BAH have been used to carry out prior regulatory assessments with respect to Australian rail infrastructure. The methodology employed by BAH is similar to that used in previous valuations.

ARTC has stated in its application that it is of the view that the BAH assessment understates the value of the network in that it does not fully address the current and future demand characteristics of businesses using the network. BAH have taken a narrow interpretation of future demand as only including an allowance for volume growth. ARTC objects to this interpretation, and asserts that the assessment has not fully considered user demand with respect to increased capacity and performance levels. This

demand has been characterised by standards required of the network, agreed by the Australian Transport Council (ATC) in November 1997, relating to the extent of speed restrictions, maximum and average train speeds on the network at various axle loadings, and allowable train lengths. ARTC has met a large part of the ATC requirement not only through some capital injection, but also through safely extending the engineering specifications of parts of the network that had previously constrained operations at the desirable standard. Normally, this 'sweating' of the asset to deliver improved capability and performance comes at the cost of higher maintenance. This has not been the case on ARTC territory where maintenance costs are efficient and have fallen.

Essentially, improved capability and performance is being extracted from assets that have been in place for some time and have previously operated at a lower standard, with the same or higher ongoing maintenance cost. By taking a narrow view of future demand in a DORC valuation, as has been done, only the existing assets are considered sufficient to meet current demand and growth (despite being previously considered insufficient without capital investment). There is no incentive for the infrastructure operator to seek ways of improving capability and performance of the existing asset base. In fact, if the infrastructure operator can achieve this at a lower cost of maintenance, it is penalised via a lower access price. On the other hand, investment in the current asset base to achieve the same end is rewarded via an increased valuation, whether or not such an approach is the most efficient means to achieve that end.

As an example, consider the context of an airport operating at a certain level of capacity and at the ceiling revenue limit. Two ways of increasing capacity and service levels would be to develop improved techniques for slot management so that more slots would become available using the existing airport asset, or maintaining current techniques for slot management but investing in more runways to increase capacity. One would consider that the former approach represents a more efficient use of resources, but because the asset value is unaltered, an increase in task would necessitate lower access pricing. In the latter case, access pricing can be maintained with respect to the increased task by virtue of the inclusion of the investment in additional runways. There is no incentive for the operator to use the former approach, as he is unable to increase profit or returns as a result, despite a more efficient operation. The latter approach is a less efficient means to the end, yet is encouraged by the access regime.

To this end, ARTC proposes that a wider view of current and future 'demand' should be taken in assessing the asset requirement to meet existing capacity. Where higher demand with respect to asset capability and service performance has been met through the extending existing engineering capability at no additional operating cost, the asset base for valuation purposes should include the alternative cost of investment that might have

been made to achieve the same capability and performance had the existing asset not been 'sweated'.

Without any adjustment to account for the narrow view taken by BAH in the valuation of ARTC's assets, ARTC would consider the valuation very conservative.

The depreciated component of asset life is generally measured in terms of asset age or asset condition. The choice of method often depends on the observability of condition, availability of information and the extent to which asset condition is maintained over time. Where assets are maintained with a view to significantly extending useful life, an asset condition assessment is more appropriate. In the assessment carried out by BAH, information with respect to the current condition of the asset was used where appropriate and where data was available and useful. This applied with respect to a major proportion of the asset base. Detailed information regarding the methodology employed, sources of information, and conclusions drawn is provided in the BAH report.

In its application, ARTC has proposed to annually increase the regulatory asset base by CPI during the term of the undertaking, for the purpose of ceiling revenue limit calculation. This has been so as to merely allow for the increased replacement cost, as originally contemplated, of the original optimised asset base and recognises the forward-looking nature of the initial valuation in terms of an allowance for growth only, as has been assumed in the BAH valuation.

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?

ARTC has proposed to differentiate certain components of its asset base with regard to the characteristics of the decline in the economic value of these assets. Specifically, ARTC has chosen not to depreciate its track, formation and structures related assets for the purposes of inclusion in the ceiling revenue limits. ARTC has also chosen to depreciate its signaling and communications assets over the estimated technological (economic) life.

In assessing the expected decline in the economic value of its track related assets, ARTC considered both the physical and economic life of the assets. It was concluded that the economic life should not be limited with respect to the life of the markets served by the infrastructure. It was also concluded that, because railway tracks are generally maintained to a steady-state standard through the application of expensed MPM, the physical assets have a perpetual useful life. For these reasons, no depreciation with respect to

track assets has been included in revenue ceilings to avoid any possibility of double counting MPM in operating expenses and as a depreciation charge. Similar conclusions have been made with respect to other regulated rail infrastructure businesses in Australia[4]. It should be noted that this treatment of MPM and depreciation is reliant upon the assumption that sufficient MPM and renewals expenditure is, in fact, incurred so that a steady-state track standard is made in perpetuity.

With respect to ARTC's signaling and communications assets, economic depreciation with respect to technological obsolescence has been assumed. This is irrespective of the maintenance incurred, or the life of ARTC markets. The BAH report described above necessarily estimated the useful economic life of the various asset types owned or leased by ARTC. BAH assumed an economic life of 30 years with respect to signaling assets, and 15 years (radio equipment) and 20 years (cabled communications backbone systems) with respect to communications assets, consistent with other assessments it has made. Modeled depreciation determined for these assets simply applied these lives on a straight-line basis to the optimized replacement costs for these assets determined on a segment by segment basis.

ARTC has proposed to depreciate its depreciable assets on a straight-line basis. ARTC favors this method on the basis of its ease-of-use and transparency. IPART, in its assessment of the pricing principles incorporated in the NSW Rail Access Regime drew a similar conclusion. The use of the straight-line method of depreciation has been employed in access regulation for a number of other industries.

[4] The IPART assessment of the NSW Regime concluded that MPM designed to maintain the track to a steady state standard was expensed, and thus no depreciation with respect to the assets should be allowed. The NCC assessment of the WA regime supported the use of a renewals annuity approach to assessing depreciation where the costs associated with a renewals program is converted to an annuity to act as depreciation.

3.5 Part 5 Management of Capacity

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?

- Capacity in its simplest form means the capability of the network to carry freight. 'Capability' has three dimensions, (i) the number of trailing tonnes the track can withstand, (ii) the speed at which the train can travel and (iii) the availability of paths on the track which can be utilized.
- The capacity analysis will therefore by necessity reflect the scope of the application. For example an operator may request a path with the following characteristics:

    - Entry to ARTC Network 'X' location , Exit location 'Y'
    - Day of Service: Monday
    - Time of Service: Entry "00.00 hrs"
    - Train length: 1500metres
    - Max axle load: 21 tonnes
    - Max speed: 110 kph
    - Preferred transit time: Exit "xx.xx" hours

    In assessing existing contractual commitments alongside infrastructure configuration and safeworking systems, a number of options or outcomes may arise. ARTC may not be able to match all of the above criteria exactly – therefore technically, capacity as per the application, may not exist. However, ARTC may be able to meet some of the criteria, eg a path may be available at 1200meters but not 1500; entry may not be available at "00.00" – but may be at "00.30"; the exit time may not be achievable (say due to number of occasion which applicant's service has to cross other services) however an exit time slightly later (or earlier) may be available.

    Rather than simply advise that capacity as per request is not available, ARTC will offer the applicant a the range of alternatives that are available that most closely match the applicants request. Currently, in most instances adequate capacity can be established in this way and the applicant avoids the need to enter into negotiation for the construction of Additional Capacity. However, if the needs of the applicant cannot be met through an alternate option, ARTC will then need to consider how Additional Capacity of the nature required by the applicant might be met and seek a costing to achieve the given outcome.

Ultimately, ARTC must maintain the safety and integrity of the network to existing users. Therefore given the dynamic nature of the network and inter-relationship that occurs between services, there may be instances where whether or not capacity exists, may be an issue of subjectivity rather than simple fact.

If having gone through this process, the applicant is not satisfied that the issue has been dealt with reasonable and fairly, the option always exists to instigate the dispute resolution process.

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

- An effective access regime is designed to ensure open access to infrastructure. In doing this it is aimed to replicate a competitive environment and hence ensure efficient investment leading to market driven outcomes.

- Due to the nature of freight traffic demands, it is not unlikely that two or more operators may request the same Access Rights on the network. Under these circumstances ARTC must have a transparent way of dealing with the conflicting demands. ARTC has proposed to do this by assessing the value to ARTC of each of the applications; where value to ARTC is measured in terms of present value of future returns and associated risks, having regard to the circumstances including terms and conditions, customer profile and history of each application.

- Whilst operators might argue this is monopolistic type behaviour, it is merely replicating what already occurs in competitive markets where there is a scarcity of resources and ensures the real market value is attributed to the service. Further, operators are (will be) already aware of this mechanism for dealing with requests for mutually exclusive access, and therefore will be aware of how their application may be addressed.

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

- Access rights will only be granted via the execution of an Access Agreement. The Access Agreement will contain provisions for withdrawal of access rights; however these largely fall into two categories:

    - **Breach of contract**; Withdrawal of access rights may result from a breach of contract, although not always. The contracts will generally allow for suspension of rights during an allowable period for rectification for less serious breaches with withdrawal of rights reserved for material default. Issues such as non-adherence to safety regulations or instructions, failure to maintain operator accreditation , or non payment of access charges may all give rise to a breach of contract.

    - **Under-utilisation**; Again this is a term of the contract and designed to avoid operators with sufficient cash buying-up paths, but not utilizing them, as a strategy to frustrate potential competition. Whilst this may seem unlikely, it is nevertheless a real possibility which must be avoided to ensure efficient use of the network and ensure healthy competition.

- As long as the terms and conditions of the contract are met, ARTC cannot withdraw access rights for the term of the contracts. The onus is therefore with the operator to ensure access rights are maintained through performance of contractual obligations.

3.6 Part 6 Network Connections and Additions to Capacity

Is there sufficient detail provided on how ARTC proposes to determine the need for additional capacity to meet an operator's needs as opposed to new investment to meet ARTC's own overall requirements?

- ARTC's undertaking clearly contemplates two scenarios. In the first, an operator wishes to connect to existing ARTC infrastructure. Generally, in these circumstances the operator is creating new, separate infrastructure, such a sidings, which will be for the exclusive use of the operator. The undertaking specifically permits such facilities to be joined to ARTC's network providing it does not compromise ARTC's existing network and meets technical, operational and safety criteria.

- Capital and recurrent costs and any incremental costs associated with the facility will clearly be the responsibility of the beneficiary of the creating the asset.

- The issues paper also asks if there is sufficient differentiation between when additional capacity is required to meet the needs of operators versus ARTC's own overall requirements. Since ARTC does not operate trains, any additional capacity created will be for the benefit of operators and not specifically ARTC.

- On this basis, specific additional capacity can be attributed to the requesting operator. ARTC is of the view that where an operator has requested additional capacity, they should be obliged to meet the costs of creating and maintaining that capacity. Where the enhanced capacity is an integral part of the network, ARTC will be responsible for the actual physical works to be undertaken and these will be charged to the operator requesting the change. Such capacity could be the subject of a separate undertaking such that ARTC or another operator gaining benefit through utilization of the capacity would be required to pay for the benefit through a contribution to the capital cost. The fundamental principle is that if an operator requires additional capacity to be created then they should bear the associated costs; however if another party wishes to utilize the facility, then recompense must be made.

- However, since ARTC wishes to support development of rail, ARTC will in the interests of the industry (and the individual applicant), consider alternative means of funding the cost of enhanced capacity. This may include ARTC paying the upfront capital costs and repayments by the operator being received by way of increased access fees or periodic payments over a nominated length of time (amortisation of the upfront costs and ongoing incremental costs). If

ARTC views it to be in its own best commercial interests, it may choose to make a contribution to the cost of funding.

- In addition to the above, there may well be opportunities identified by ARTC where ARTC chooses to invest in enhanced infrastructure since it believes this is a commercially sound decision for the industry, even when there is no specific project proponent. In these instances ARTC alone will bear the market risk and fund the capital cost. Access to such capacity will be subject to the ARTC undertaking.

Is the undertaking clear on whether the access pricing principles that will apply in respect of additional capacity will be the same as for existing capacity?

- The undertaking will apply only to the Network as defined in the document. Any extensions to the network may have been developed within a different environment and therefore it may be necessary to make them subject to a different regime, or alternatively ARTC may seek an amendment to the undertaking the subject of this paper.

- As discussed in the section above, whether or not additional capacity is subject to the same pricing principles as existing capacity will be dependant upon the nature of the capacity and motivation for its creation.

3.7 Part 7 – Network Transit Management

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

- The Network Management Principles (NMP's) prescribe the guidelines to be followed in the event there is a scheduling conflict between two trains. If services ran according to schedule such rules would not be necessary, however the nature of rail operations is such that delays and incidents inevitably do occur. The NMPs send the right messages to operators by ensuring that those services that perform properly, ie come onto the system on time, do not suffer any operator-induced failures, should exit the network on time. Those that do not comply suffer the consequences by being held in loops until a space is available for them to continue their journey. In essence those services that meet the timetable will generally exit on time; those that suffer operator incidents will frequently be delayed and exit the Network later than their scheduled arrival time.

- The Network Management Principles as contained in the undertaking reflect the current practice undertaken by ARTC across its Network. These have been in use by ARTC since it inception and are widely supported by operators as being fair and reasonable. Operators support the NMP's because they make users accountable for their performance on the network. Further, the nature of the NMP's is such that to the extent possible, users who manage their services effectively are insulated from the flow on effects in terms of delays from poor performers. Application of the Principles gives greater certainty of track performance to those companies managing their above rail activities reliably replicating what would occur in a non-dynamic environment.

3.8 Schedules

Are the terms and conditions in the Indicative Track Access Agreement appropriate and consistent with the access undertaking? Is it appropriate for the Indicative Access Agreement to be part of the undertaking?

- The Indicative Track Access Agreement is incorporated into the undertaking as a guide only. However, ARTC is prepared to be bound by the terms and conditions as presented should an access seeker require use of the track for an Indicative Service, and the capacity exists to accommodate the specified service. Thus, inclusion of the access agreement gives absolute clarity to an access seeker in relation to the responsibilities and obligations of both parties should access be granted.

- It should be noted that the access agreement as included is the culmination of extensive consultation over a two year period with the Interstate Rail Operators Group (IROG) comprising National Rail, SCT, Toll Rail, Patrick The Australian Stevedore, Great Southern Rail and FreightCorp. The agreement, or similar, has also been executed by a number of other rail users including Freight Australia, ATN, Queensland Rail, Great Northern Rail Services, Silverton Rail.

- Whilst ARTC is prepared to commit to the agreement as included – giving certainty to access seekers wanting standard access, ARTC recognizes from views previously expressed by operators that some also wish to maintain a certain level of flexibility and the ability to negotiate. Because of this ARTC has included the agreement as a guide for those access seekers wishing to negotiate outside of the published agreement.

- In relation as to whether the terms are consistent with the undertaking, they are inherently the same since ARTC has developed the undertaking based on what occurs in practice. Further ARTC has incorporated outcomes from its discussions over the past two years with operators.

- The current practices of ARTC as encompassed in the undertaking has seen the number of operators gaining access to ARTC's Network flourish over the past two years with access being granted to a number of new operators as mentioned above. This is evidence that the processes and practices utilized are effective and viewed as fair by access seekers notwithstanding everyone in business is constantly seeking "a better deal".