AUSTRALIAN RAIL TRACK CORPORATION LTD

PRODUCTIVITY COMMISSION INQUIRY

ROAD AND RAIL FREIGHT INFRASTRUCTURE PRICING

AUSTRALIAN RAIL TRACK CORPORATION SUBMISSION

May 2006

Contents

1. Executive summary

In this submission, ARTC has sought to provide detail of the Commission of existing competitive framework on the interstate rail network, and ARTC's current approach to access pricing and asset sustainability on the interstate rail network.

ARTC has identified a number of concerns it has with the current approach to heavy vehicle road user charging, many of which give rise to an inconsistent approach to road and rail infrastructure pricing. ARTC has not suggested that the approach to pricing of rail infrastructure is perfect, but it provides a better framework for the improvement in cost recovery and ultimately full economic cost recovery in the long term.

ARTC considers that two important elements that must be in place in order to establish and efficient and integrated framework for investment in the transport sector are competition and maximisation of cost recovery. To achieve this, ARTC recommends to the Commission the following elements of an efficient and competitively neutral pricing regime:

- There should be a **single regulatory objective**, ideally efficiency in the use, provision of and investment in, road and rail infrastructure. It is also necessary to have regard to the impacts on competition in the road and rail freight market (between and within markets), when designing a road and rail infrastructure charging regime.

- **Full economic cost recovery (including social costs)** to underpin investment triple bottom line investment decisions should be the long term goal.

- In the first instance (short term), it is important that **pricing of road and rail be based on the same economic criteri**a.

- **Infrastructure investment & planning should be based on economic (triple bottom line) criteria.** Investment planning should be carried out on a network/corridor basis (where transport services are provided to a market or markets) vis-à-vis planned on a modal basis. There should be a long term focus on the development and sustainability of transport infrastructure. Investment should be undertaken on an equitable, rigorous and transparent triple-bottom line economic basis. In the long term, both road and rail investment would be underpinned by through economic cost recovery (infrastructure provision would effectively operate as a 'business'). In the short term, achievement of this outcome is best underpinned by efficient, and competitively neutral, pricing of infrastructure usage. ARTC supports the principles underpinning the AusLink framework as a mechanism to deliver efficient and effective investment solution for the transport industry.

- Cost allocation, pricing and investment process should be underpinned by **high quality and specific data collection**.

- There should be a **national basis for economic and safety regulation for both modes**.

ARTC recognises that the achievement of an efficient and competitively neutral infrastructure pricing regime is not a simple exercise and may be a long term development. ARTC recommends that the Commission, in the first instance, should focus on those aspects of road and rail infrastructure where competition exists. The Commission should also not seek to achieve precise accuracy in the first instance. In the long run, technology and market developments could create a natural impetus for expansion to the wider transport network. In particular, ARTC makes the following recommendations in relation to implementation of mechanisms to deliver efficient and competitively neutral infrastructure pricing.

- **Technology based mass-distance tracking for road.** ARTC believes that there is some potential for the application of technology to deliver mass distance charging by the adoption of a suitable approach in a smaller scale in the first instance. Initial focus to the competitive interstate freight markets limits the extent of the fleet participation to around 4% (road industry estimate of the rail competitive component). Application could also focus on only those elements of the national network defined by AusLink as predominantly serving these markets. It should be noted that the benefits of GPS tracking and vehicle weighing technology extend beyond the improvement of pricing and investment signals, and assisting in the delivery of competitive neutrality between modes. With regard to safety, authorities would be far better placed to ensure vehicle maintenance and operating standards are maintained if vehicle travel patterns could be monitored. Certain parts of the existing road fleet have already invested in GPS tracking technology for fleet and supply chain management.

- **Competitively neutral pricing framework and full economic cost recovery.** ARTC has proposed that this could be considered to be a long term objective. Moving to pricing of road and rail be based on the same economic criteria in the short term is likely to be more acceptable politically. To this end, ARTC considers it appropriate that the Productivity Commission should undertake estimation of the full economic cost of road and rail provision, using DORC valuation principles. This should focus on the infrastructure used by both modes where in competition. By proper allocation for cost to those vehicles competing with rail, a comparison of the extent of full economic cost recovery could be undertaken.

- **Investment and planning**. ARTC supports the principles underpinning the AusLink framework as a mechanism to deliver efficient and effective investment solution for the transport industry. This framework can be enhanced by infrastructure pricing that is competitively neutral, maximises the extent of full

economic cost recovery, and has full economic cost recovery as the long term objective, and improved agency data collection and reporting.

- **Recognition of social cost of infrastructure usage**. Significant useful work has been undertaken in recent years (eg BTRE, Victorian Department of Infrastructure, QR and other agencies) sufficient to ascertain at least a nominal initial treatment for both modes that can be improved upon over time. AusLink investment evaluation principles have sought to incorporate quantified environmental impacts and may be useful in this regard. The inclusion of nominal charging for externalities on both modes (net of internalised cost) will create greater awareness and impetus for improved assessment of these costs, through more refined research over time.

- **Competitively neutral and consistent regulatory framework**. Rail needs to have a single national regulator in respect of economic regulation. It is not necessary that the same regulatory body be used for both modes. It is more important that the regulatory objectives and mechanisms be consistent. In any event, economic regulators need to operate independently from government decision making. ARTC would strongly support a recommendation by the Commission to adopt the ACCC as the single economic regulator for the national rail network. This would deliver the required consistency and independence in access regulation and pricing.

Further detail in relation to these recommendations is provided at Section 9.

2. Introduction and summary of the Productivity Commission Inquiry

The Council for Australian Governments ("COAG") is developing a new Competition Policy Reform Agenda ("Agenda"). A number of commitments and studies were initiated at the last COAG meeting in February 2006 to assist with the development of the new reform agenda. These include:

- A review of economic costs of freight infrastructure and efficient approaches to transport pricing by the Productivity Commission (Attachment A);
- An agreement on adopting the ARTC access undertaking as a national approach for all major freight rail lines;
- Development of a program to harmonise and reform rail and road regulation;
- Improved land transport investment appraisal approaches to ensure best use of public investment;
- Commitment to reduce current and projected urban transport congestion including a Commonwealth State review into the main causes, trends and impacts and options for managing the impact of urban congestion in Australia's major cities; and
- Implement nationally consistent rail safety regulation.

ARTC considers that a number of the elements of Agenda are related. In particular the development of efficient and competitively neutral transport pricing will need to consider linkages with, and the appropriateness of signals to, improved land transport investment appraisal approaches.

The broad elements of this Inquiry, as directed by COAG, include:

- Identification of the optimal methods and timeframes for introducing efficient road and rail freight infrastructure pricing in a manner that maximizes net benefits to the community.
- Determining the full financial, economic, social and environmental costs of providing road and rail infrastructure.
- Identifying other barriers to competition in road and rail transport.
- Recognising that transport operators and users and remote and rural communities will need sufficient time for transition and adjustment to pricing arrangements.

3. ARTC Background

ARTC was created after the Commonwealth and State Governments agreed, in an Inter-Governmental Agreement ("IGA"), in 1997 to the formation of a 'one stop' shop for all train operators seeking access to the national interstate rail network. The IGA had a term of 5 years. ARTC is a company, under Corporation Law, and its shares are fully owned by the Australian Government, and overseen by the Ministers for the Departments of Transport and Regional Services, and Finance and Administration.

Under the IGA, ARTC would be responsible for negotiating access to the national interstate rail network between Brisbane and Perth by virtue of direct ownership or lease of certain parts of the network, or under wholesale arrangements to be negotiated with State Government owners of other parts of the network as applicable.

ARTC commenced operations in 1998 with the following charter:

- Improve performance and efficiency of interstate rail infrastructure
- Increase capacity utilization
- Listen, understand and respond to the market
- Operate on sound commercial principles
- Provide shareholders with a sustainable return on capital invested

ARTC's corporate mission statement is:

> 'Through innovation and creative strategies, satisfy our customers, expand the industry; provide efficient access, across modes, to the interstate network; and assist in the development of an integrated national transport logistics network."

ARTC owns or operates over 7600 route kilometres of standard gauge track, mainly in South Australia, Victoria, Western Australia and NSW. ARTC owns the following rail corridors:

- Wolseley – Kalgoorlie
- Pt Augusta – Whyalla
- Broken Hill – Crystal Brook
- Tarcoola – Alice Springs (long term lease to Asia Pacific Transport, operators of the Alice Springs – Darwin Railway)
- Parts of the Adelaide metropolitan track between Dry Creek and Outer Harbour.

In Victoria, ARTC leases the two mainline interstate standard gauge corridors from the Victorian Government, being:

- Melbourne – Wolseley
- Melbourne – Albury

ARTC also manages (for Melbourne Ports Corporation) access to the connection from the interstate mainline network to the Appleton and Swanson Dock precincts in Melbourne.

ARTC has a 60 year lease on the interstate mainlines in NSW from Albury to Sydney, Cootamundra west to Broken Hill, and from north of the Sydney urban area to the Queensland border. The lease also includes the Hunter Valley network and from Parkes to Werris Creek. In total ARTC manages around 3,200 route kilometres under its lease in NSW.

Over these corridors, ARTC is responsible for:

- Selling access to train operators
- Development of new business
- Capital investment
- Operational management
- Management of infrastructure maintenance

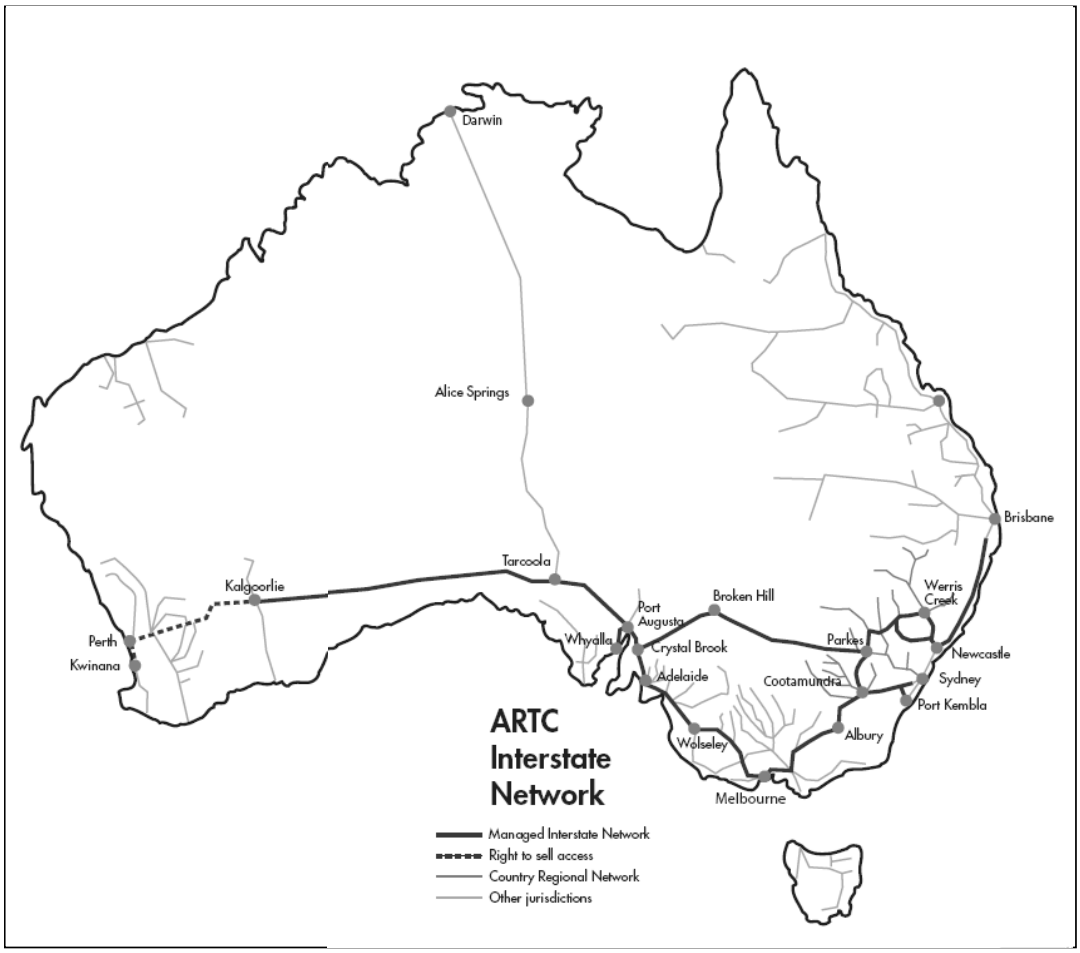
In NSW, ARTC also manages, on behalf of the NSW Government, the regional branch line network in NSW consisting of around 40 track segments and being around 3350 km in length. ARTC carries out the maintenance and train control on the network under contract to the NSW Government, which is responsible for ongoing funding on investment in the branch line network.

The remainder of the interstate network is still controlled by various State Government agencies or private entities, as follows:

- Brisbane – Queensland border (Queensland Rail ("QR"))
- Kalgoorlie – Perth (WestNet Rail, which is currently being acquired by Babcock and Brown, has a long term lease arrangement with the West Australian Government. ARG above rail operations in Western Australia have recently been acquired by QR)

ARTC's interstate network is described in Figure 1 below.

Figure 1 ARTC's Interstate Network



The IGA provided for ARTC to negotiate wholesale access arrangements with each of the track managers described above, which would give ARTC exclusive right to sell access for interstate operations within these jurisdictions. To date, ARTC has negotiated an agreement with the West Australian Government (assigned to WestNet Rail) that gives ARTC such exclusive rights with respect to new agreements or the novation of existing agreements. WestNet Rail still effectively controls the maintenance, investment and operations between Kalgoorlie and Perth. As yet, no operations are being conducted on this part of the network pursuant to an access agreement developed under the wholesale arrangements.

ARTC has been unable to develop satisfactory wholesale agreements with QR.

ARTC's lease in NSW effectively gives ARTC the same control over the interstate network in NSW as it has on its east-west corridors, and delivers the same continuity of access management on the north-south corridors, as currently applies to the majority of the east-west corridors. The arrangement will also deliver to the interstate north-south corridors significant performance benefits designed to improve rail's competitiveness on these corridors and bring about substantial modal shift, through the investment of around $1.4bn. The modal shift sought will depend upon the improvement in network condition,

performance and capacity translating to overall rail performance and benefits being passed on to users of rail services. This will depend on the extent to which network users invest in above rail capacity such as rollingstock and terminals, as well as the extent to which rail on rail competition will ensure above rail yield benefits through the operation of more efficient services are passed onto users vis-à-vis retained as above rail profits. The modal shift will also depend on the relative price and service competitiveness between road and rail on these corridors, which could be impacted by any Government policy change arising from the outcomes of this Inquiry.

Obviously, such changes would also impact on other parts of the interstate network where road and rail compete.

Under the IGA, ARTC was required to submit a voluntary access undertaking in accordance with Part IIIA of the Trade Practices Act (1974) (TPA) to the Australian Competition and Consumer Commission (ACCC). An undertaking was submitted by ARTC in January 2001, and approved by the ACCC in May 2002. The undertaking applies to the interstate network controlled by ARTC, and sets out the framework under which access to that network can be negotiated with ARTC in a fair and balanced way. The ACCC indicated that it saw ARTC's access undertaking as laying a foundation for the development of a consistent 'national' rail access regime in conjunction with other state based jurisdictions.

ARTC welcomes the COAG agreement requiring governments to take steps to apply the ARTC access undertaking as a national approach for the interstate network and other major regional freight rail lines in Australia.

ARTC intends to submit new access undertakings for the interstate (including NSW) and Hunter Valley coal networks to the ACCC in the near future. At this time, it is ARTC's intention to submit separate access undertakings for the interstate network, and the Hunter Valley coal network, that recognize the different commercial and operating characteristics of the infrastructure involved.

4. Rail Freight Market Competitive Framework on the Interstate Network

4.1 East-West Interstate Rail Network

There is little doubt since the introduction of competition reforms in the rail industry in the mid 1990's that competition for rail freight services has taken hold most on the east-west interstate network. ARTC considers that this has occurred for a number of reasons including:

- horizontal and vertical structural arrangements on the bulk of this network that promoted above rail competition
- rail's natural competitive advantage and the relative economics of intermodal freight transport on this network
- the improvement in quality and capability of the infrastructure that has lead to improved rail efficiency and competitiveness.
- Infrastructure pricing that rewards rail users for improved operating efficiency

The impact of this competition in east-west interstate markets has been significant.

Where ARTC has greater control over infrastructure performance, ARTC has strategically invested in infrastructure improvements designed to reduce rail transit times and increase service reliability (longer crossing loops, capability for heavier axle load operations) as well as enable more efficient above rail operations. On these corridors rail transit time has reduced, service reliability improved and freight rates fell significantly. Operators have been able to improve above rail productivity (running longer heavier trains) which has resulted, in combination with a real reduction in access pricing since ARTC's establishment, in a real reduction in cost of access on the east west network of well over 20% over that period.

Figure 2 below shows the increase in average train length for high flagfall (intermodal) services on two key corridors in east-west markets. Figure 3 shows the real reduction in average access yield (revenue per gross tonne kilometre) and user cost of access (revenue per net tonne kilometre) for all services on ARTC's network in SA, Victoria and WA.

Figure 2 East-West Intermodal Train Length by Corridor

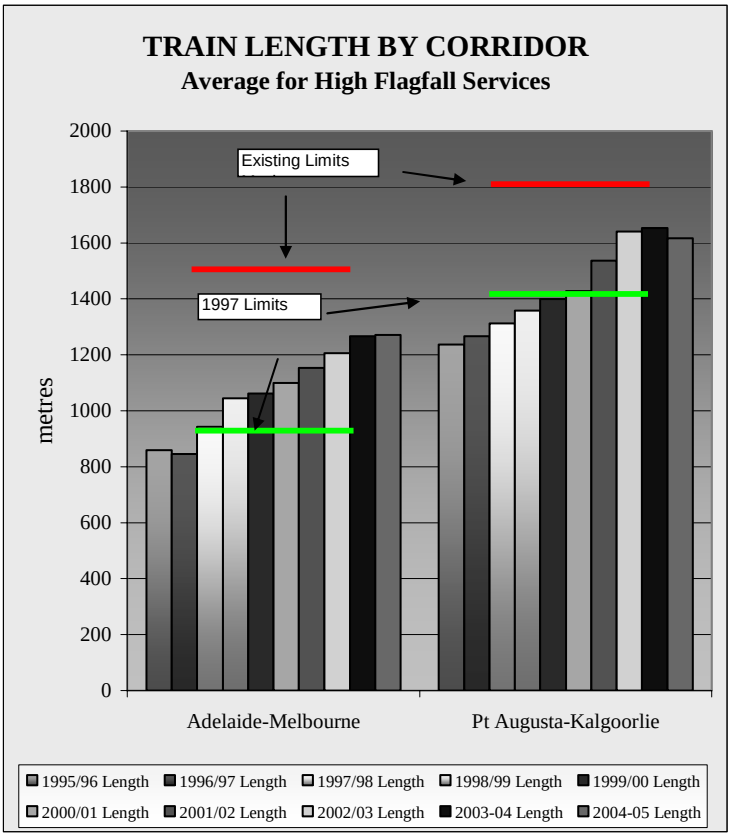
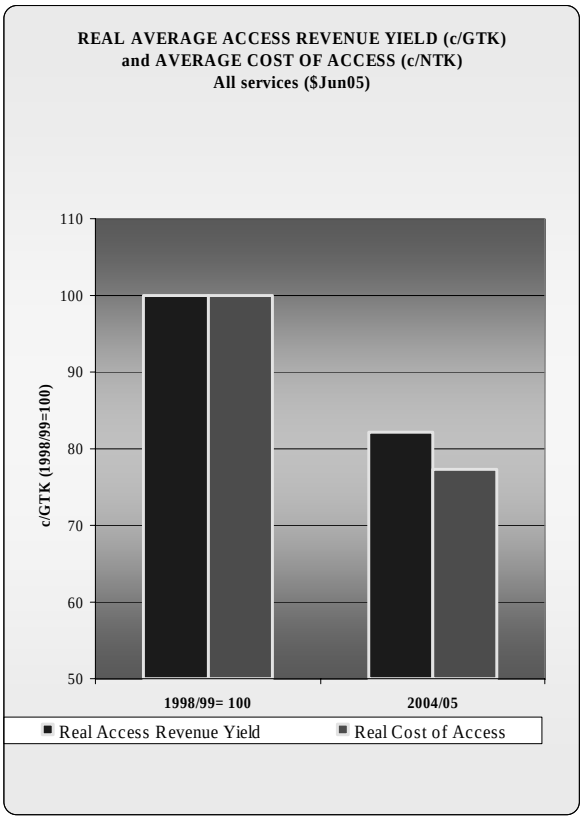
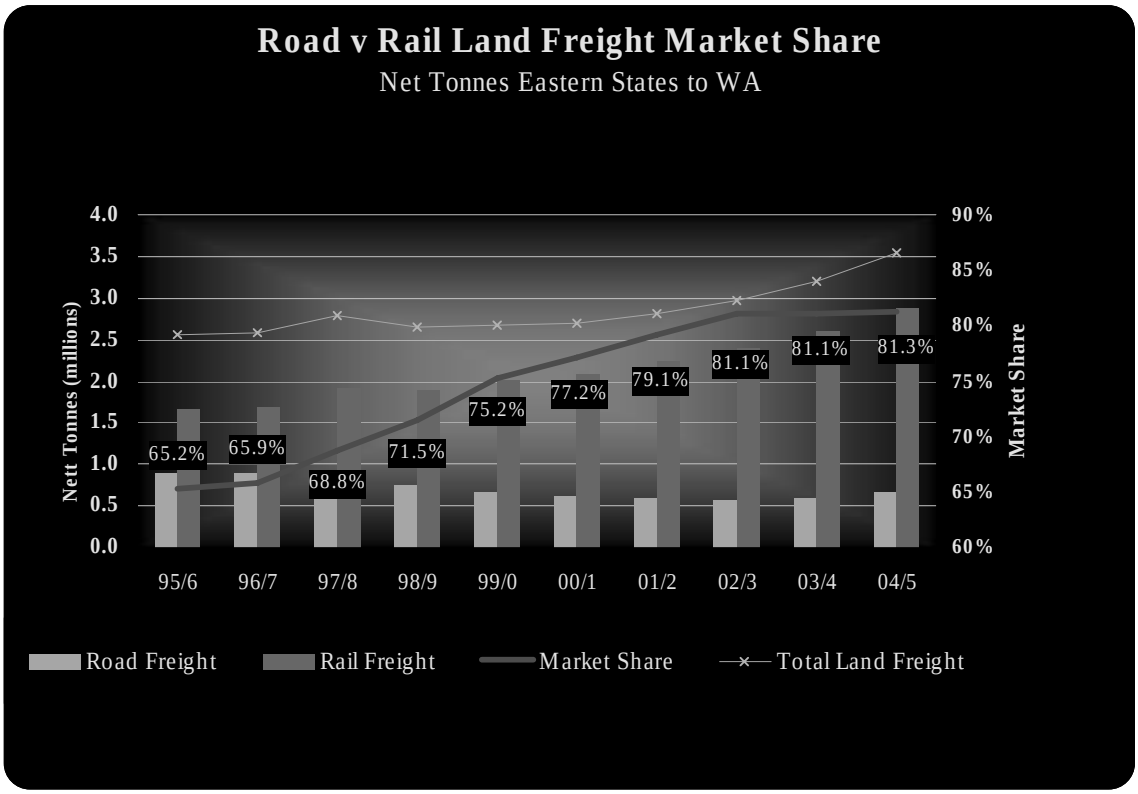


Figure 3 Real Average Access Yield and Cost of Access



The combined effect of improved reliability and transit times and lower cost of access has, together with the effect of above rail competition on the east-west corridors that have meant that rail improvements are passed on in the market place, enabled rail to increase it's share of the land transport market from the eastern states to WA by an average of 16% (from 65% in 1995/96 to around 80% currently). This has meant a reduction in the use of road by around 350-400 journeys per week across the country than otherwise might have been the case. ARTC considers these to represent much improved transport and social outcomes for business and communities utilizing this network. Figure 4 below shows the trend in rail market share of the Eastern States to WA land freight transport markets over the last 15 years.

Figure 4 Rail share of the Eastern states to WA land transport market



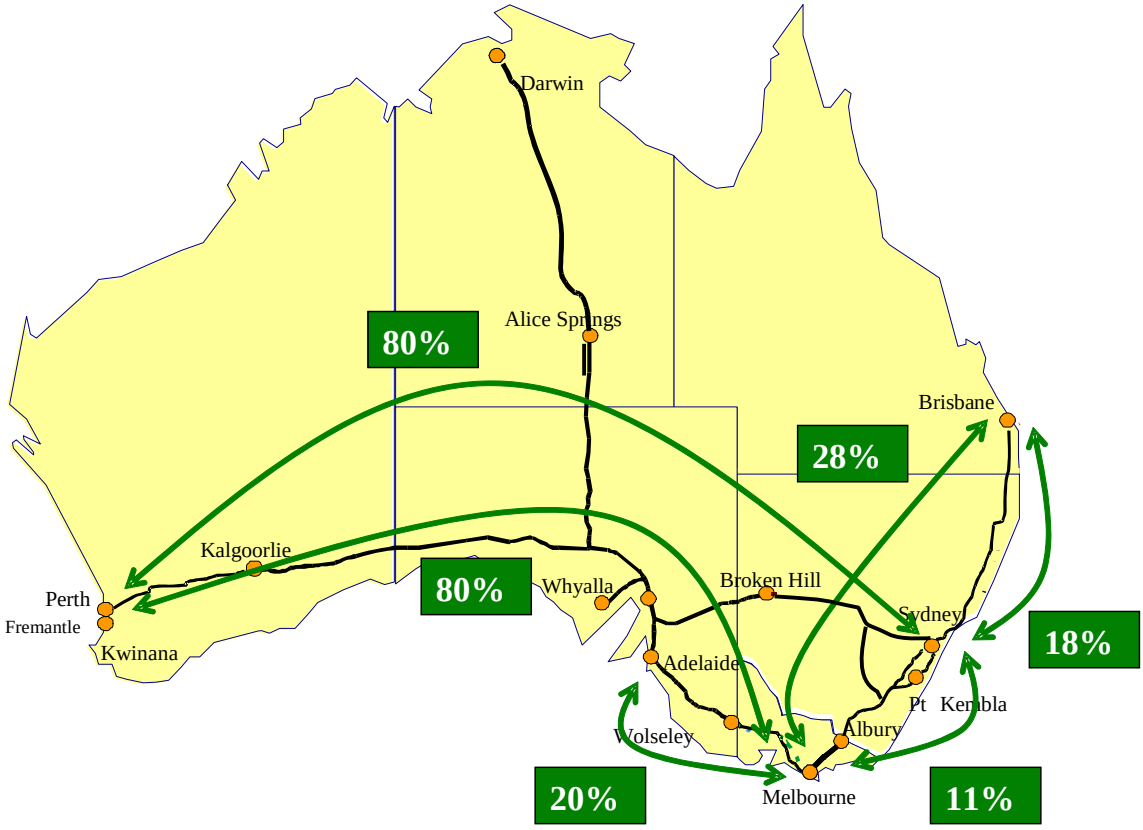
ARTC recognizes that into the future, rail will need to work hard to maintain its market share in east-west freight transport markets, particularly in the light of the potential for strengthening of competition from east-west coastal shipping[1], and possible outcomes resulting from the concentration of participants in east-west freight logistics markets.

[1] PAN Shipping has recently commenced dedicated coastal shipping services between the eastern state capital cities, Adelaide and Perth.

4.2 North-South Interstate Rail Network

Similar improvements have not been achieved on the north-south corridors. Figure 5 below shows estimates of rail's market share of inter-capital intermodal land freight markets. It shows that whilst rail has significant markets share in east-west markets, road dominates the shorter north-south markets. Reasons for this include a different economic framework for road/rail competitiveness, rail infrastructure performance & capacity (including Sydney access and passenger priority), jurisdictional access/safety regulation and operational/engineering frameworks, and lack of horizontal coordination in access and infrastructure investment.

Figure 5 Rail share of interstate intermodal markets



Addressing these reasons is one of the key motivations for ARTC to seek greater control over the north-south interstate rail network through its lease in NSW. Key objectives of ARTC's lease is to bring about a more consistent framework for the management of access, safety and operational frameworks on the north-south interstate markets, as well as a more holistic approach to the maintenance of, and investment in, infrastructure assets on the corridor.

ARTC is committed to pursuing significant growth in rail market share on the important Melbourne–Sydney–Brisbane corridor. In 2005-06, ARTC finalised, in consultation with its customers, a detailed infrastructure investment program for the north-south interstate

corridors. ARTC's strategy is designed to optimise the investment to achieve its goal of major growth in rail volume, and recognises that the north-south interstate corridors service 3 distinct interstate markets, Melbourne–Brisbane (5mTpa), Melbourne–Sydney (11mTpa), and Sydney–Brisbane (7mTpa).

ARTC's objectives for the works are to clearly achieve market performance requirements in the area of transit time, reliability, capacity and yield (above and below rail) as described below. All works undertaken must have a benefit or multiple benefits to these objectives. Fundamental to all is achieving the benefits safely. Table 1 below details key market performance outcomes of the investment program, designed to increase rail competitiveness in north-south interstate markets.

Table 1 North-South interstate investment strategy – key market outcomes

Outcome	Melbourne —Sydney	Sydney— Brisbane	Melbourne —Brisbane
Transit Time (hours)			
2005	13.5	19.4	32.9
2010* - 1500m	10.2	15.5	27.0
- 1800m	11.5	N/A	N/A
Reliability (%)**			
2005	55%	55%	45%
2010*	75%	75%	75%
Availability (%)***			
2005	50%	35%	60%
2010*	75%	60%	85%
Above Rail Cost Reduction (%) 2010*	7%	6%	8%
% Volume Increase 2005-2015****	174%	198%	166%

*Assumes 1800m train Melbourne—Sydney and 1500m train Sydney—Brisbane
**On time arrival at terminals
***Availability of train paths to meet market desired time frames
**** Medium Case Volume Growth

ARTC has developed a business case in relation to this investment program that is predicated upon modal shift to rail resulting from the improvement in rail network condition, capability and performance. ARTC has identified risks associated with achieving satisfactory financial performance of the investment, with important ones being:

- Complementary investment in above-rail capacity by ARTC's customers including terminal capacity to handle significant volume growth, as well as sufficient and suitable locomotives and wagons.

- The passing on to end-users of significant above rail cost improvements resulting from the investment. ARTC considers that an important element to ensuring above rail yield benefits are passed on is the existence of healthy competition in above rail markets, as well as intermodal competition.

- Distortions in infrastructure pricing for both rail and road, that prevents above rail entities from competing with road in the north-south interstate markets on fair and equitable terms.

The removal of distortions in infrastructure pricing, together with improving cost recovery in both modes, will greatly assist in mitigation of other risks, where greater certainty and confidence in markets will encourage investment in rail assets.

Although outside of the scope of the Commission enquiry, ARTC notes that there are a number of elements, other than pricing and access to the rail network, necessary to compete in interstate intermodal rail freight markets including:

- availability and access to terminal and yard facilities,

- availability of locomotives and rollingstock, and,

- critical mass of specific operations and overall business to achieve commercial sustainability

4.3 Regional markets served by the ARTC network.

As well as the interstate markets for intermodal and industrial products, the ARTC interstate network serves a number of regional networks in several Australian states. Specifically, ARTC network carries significant volumes of export grain and local general freight in SA, Victoria and NSW, as well as export coal on the Hunter Valley coal network to the port of Newcastle and, to a lesser extent, export coal through Port Kembla.

As such, ARTC has an interest in the economic health and sustainability of these regional markets and the role that rail plays in export supply chains. Rail is a significant player in regional export grain markets in most states and although road is an important competitor in grain transport markets, rail has generally had the majority market share. This is because rail has, through economies of scale, been able to offset deficiencies in service levels and capabilities by offering competitive freight pricing. Importantly, grain rail freight rates are, to a large extent, constrained by the equivalent road pricing/service offering.

Export Grain

Regional rail systems play an integral part in the delivery of regional grain volumes to ports, are at risk through low cost recovery and possible unsustainability of assets based on present cost recovery. Over the past 10-15 years, major reform of the rail industry has resulted in a significant improvement in rail efficiency, service levels and lower freight rates. Reforms during this period have resulted in:

- Vertical integration and privatisation of rail operations and the regional grain infrastructure in SA, Victoria and WA. The introduction of third party access regimes to enable above rail competition for grain haulage

- Vertical separation of the rail operations from the regional grain infrastructure in NSW, with privatisation of the contestable above rail operations, and corporatisation of the monopoly infrastructure element. The introduction of an open access regime to encourage competition.

Previously, grain networks had largely been state government owned vertically integrated railways.

In most states the condition of the branchline infrastructure is poor and deteriorating further. The quality and capability of the infrastructure is a major impediment to the efficiency of rail operations. The current poor standard of branchline infrastructure results from a number of historic and economic realities such as:

- many years of under-investment in the network

- low and seasonal volume on many lines is insufficient to sustain economic return for the owner

- a lack of road and rail infrastructure pricing transparency and equity

- historic balance of economic regulation is towards efficiency rather than sustainability

Inherited maintenance deficit

The present maintenance deficit is significant on many of the lines producing a ‘catch 22’ situation where the cost to improve the lines back to a reasonable service level is well over that which could achieve a viable economic return; a situation that has resulted from past deterioration in infrastructure condition and service level.

Lack of infrastructure pricing transparency and equity

Contributing to the above, is the failure to properly price road transport placing rail pricing at market disadvantage. This is exacerbated by the cost of road and grain transfer to road being masked in this false economic effect.

Historic balance of economic regulation is towards efficiency rather than sustainability

The fear of competition and the sometimes constrained return to the asset owner inhibits asset renewal to an extent that could produce market failure. Regulatory practice to date has focused more-so on delivering efficient service provision (and lower end user cost) than on investment for sustainability and capacity. Significant gains have been achieved for the industry and now the focus needs to be re-balanced towards the need and incentives for infrastructure owners to renew assets and invest for capacity enhancement. This needs to be recognised in the regulatory framework.

In the end, market forces will dictate the most appropriate transport mechanism for the industry. It is up to Government to provide a policy, regulatory and investment framework in place that supports this. To this end, ARTC would support improved transparency and equity of modal infrastructure pricing in a manner that produces fair and efficient outcomes for the transport industry as a whole.

Export Coal

The export coal industry has a significantly different economic framework to that which applies with regard to export grain and rail branchlines. Key differences are:

- The ability of the industry to be able to pay for sustainable high quality infrastructure

- The more integrated nature of the coal supply chain, involving the mine, rail network, above rail operations, and the port. This necessitates a highly coordinated approach to the utilisation of the infrastructure where maximum capacity is not necessarily achieved by optimising utilisation of discrete components of the supply chain, but by optimising utilisation of the supply chain itself. This is more difficult for the export grain industry.

- The more regular nature of volume throughput.

- The lack of a highly competitive transport alternative, where infrastructure pricing is governed by regulation rather than competition.

It is now well documented that the current high international demand, and pricing, for coal has resulted in coal supply chains in NSW and Queensland reaching, and exceeding, existing levels of capacity, resulting in a bottleneck, usually manifested at the port. The bottleneck may have resulted from insufficient infrastructure capacity being available in

one part of the supply chain, or may have resulted from less than optimum coordination of the supply chain as a whole.

ARTC's main experience in this regard is with the Hunter Valley coal supply chain. Over the past 3-5 years, supply chain throughput has increased from around 60mtpa to around 80-85mtpa. This has been achieved through a combination of:

- Limited infrastructure investment in rail and port infrastructure.
- The identification, and reduction, of inefficient operating practices.
- A more coordinated approach to coal supply chain management.

Most improvement in capacity has resulted from 'soft' investment in management practices and support systems, rather than investment in 'hard' assets. From the rail perspective, ARTC understands that infrastructure investment by the previous network manager was largely constrained by the long term nature of the investment vis-à-vis the economic life of the business funding that investment, and the regulated return from that investment vis-à-vis the perceived risks associated with that investment. Such risks included stranding risk, market risk and regulatory risk.

In the end, the perceived constraint on infrastructure investment in the industry is likely to have forced participants to look at alternative means of increasing chain throughput such as improving coordination, management practices and information usage. It could be argued that this resulted in a more efficient outcome for the industry than equivalent investment in hard assets.

Given that efficiencies with regard to chain management practice have now largely been achieved, the industry must now take the next step of developing a quantum increase in chain capacity from existing levels to meet forecasted demand for coal throughput over the next 5 years.

For its part, ARTC is currently refining, with the industry, a Hunter Valley corridor capacity improvement strategy that is intended to increase capacity to meet industry forecasted demand of around 140mTpa by 2011 requiring infrastructure investment of around $375m. The coal industry has indicated support, and willingness to pay for, this investment, which ARTC considers to be a prerequisite to making the investment.

One risk perceived by ARTC to this investment is the need for other parts of the coal supply chain to invest in complementary infrastructure such as above rail assets, and port capacity in order to increase overall chain capacity. In the Hunter Valley, ARTC notes that the owner of the port has announced investment to increase port capacity from 89mtpa to around 102mtpa at a cost of $170m. The NSW Government has announced approval of a 3rd loader facility operated by a group separate from Port Waratah Coal Services. This 3rd loader is projected to be constructed by the end of 2009 and to have initial capacity of 30mTpa.

ARTC considers that one of the key impediments to further improving the efficiency, capacity and sustainability in coal supply chains is the impact of regulation. ARTC supports the application of National Competition Policy to coal supply chains, and notes that this has resulted in substantial efficiencies being made and reductions in infrastructure pricing for coal users. There is however, strong evidence that the regulatory balance applied to coal supply chains in NSW and Queensland may have constrained sufficient investment in recent times in order to grow and sustain these industries in an internationally competitive environment in the medium to long term.

5. ARTC's Approach to Market Competition, Pricing, Growth & Asset Sustainability

In order to achieve a key objective of increasing utilization of the interstate rail network, ARTC has adopted a strategy of growing the use of rail for the movement of interstate freight in Australia by improving rail's competitiveness within the broader freight transport logistics framework. ARTC can only assist the industry in this way within the context of its role as a track manager, currently of only part of the interstate rail network. Rail's competitiveness is also a function of the activity of rail transport operators (ARTC's customers) and the extent to which rail is able to effectively integrate and communicate with other elements of the transport and distribution supply chain within various interstate and international transport markets.

ARTC's strategy for improving rail competitiveness is largely built upon the following aims:

- increasing the reliability of interstate rail transport
- reducing interstate rail transit times
- reducing the real cost of access to the interstate rail network
- increasing the level of above rail competition on the network
- increasing the degree of consistency in the application of access and safety regulatory frameworks on the interstate rail network.

To date, ARTC's investment and maintenance program, and its approach to pricing and access, have largely been focused on achieving these aims.

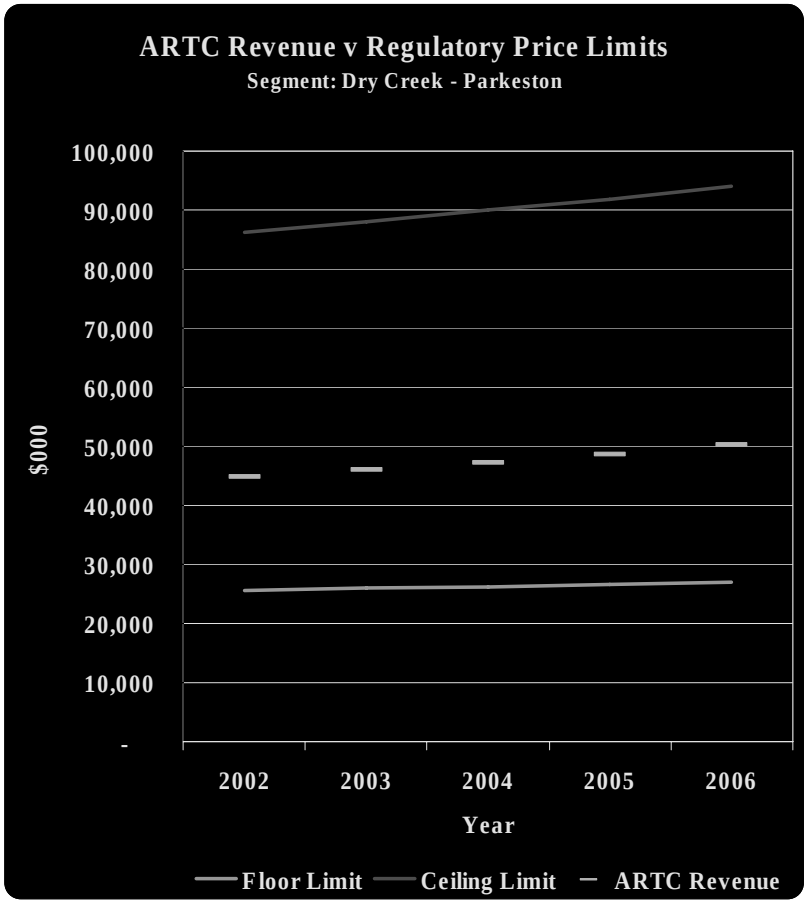
ARTC's Pricing Approach

ARTC's strategy of growing freight volume on rail also underpins ARTC's approach to pricing, which has been endorsed by the ACCC. ARTC has sought to set access pricing at a level that will enable rail to be competitive with road in markets served by the interstate network. With the current level of utilization of ARTC's network, however, pricing at the level results in the amount of revenue collected by ARTC not being sufficient for the long-term economic sustainability of its network, valued at a depreciated optimized replacement cost level. It is ARTC's strategy to grow volumes in the long term, such that rail can remain competitive and achieve long-term sustainability of its asset.

ARTC considers that this strategy is the only realistic one available to achieve long term sustainability on the interstate rail freight industry in an environment where its main competitor (long haul, heavy road transport) is not paying for the full economic cost of the infrastructure it uses. Figure 6 below shows a comparison of ARTC's current level of

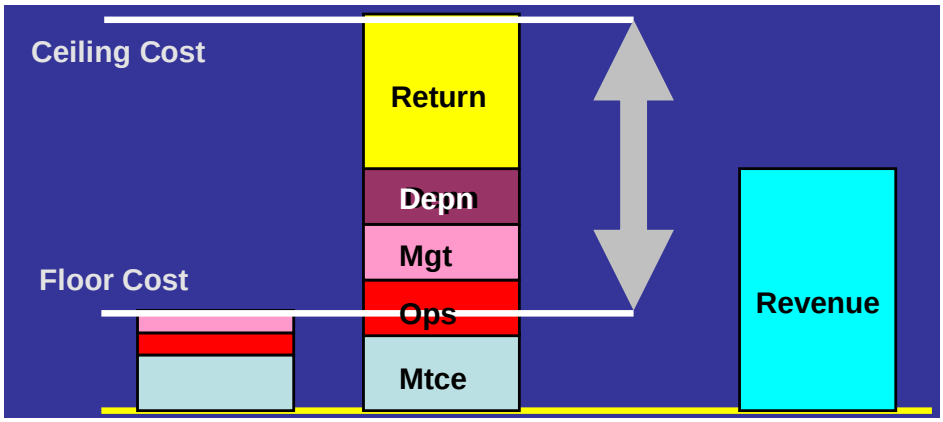
revenue against regulatory floor and ceiling revenue limits on that segment of the interstate network between Dry Creek (Adelaide) and Parkeston, near Kalgoorlie. This section of the ARTC network achieves the highest level of cost recovery. It demonstrates that, in order to achieve full economic cost recovery, in a regulatory sense, ARTC access pricing on this section would need to double.

Figure 6 Comparison of ARTC Revenue against Floor and Ceiling Revenue Limits.



ARTC's Access Undertaking provides for commercial negotiation of pricing between floor and ceiling revenue on each of ARTC's pricing segments. Floor revenue is equivalent to the incremental cost associated with a segment, whilst ceiling revenue equates to the economic cost of a segment including a return on assets valued on a DORC basis, and a return equivalent to ARTC's WACC contemplating the risks associated with the commercial environment in which ARTC operates. Figure 7 shows the building block approach inherent in the ARTC regulatory ceiling test. Because the gap between such limits is often very wide, ARTC has committed to offer indicative pricing currently available to existing services of an indicative type to any access seeker agreeing to operate under substantially the same terms and conditions. Indicative pricing is publicly available on ARTC's website.

Figure 7 ARTC's regulatory ceiling test



ARTC's approach to the differentiation of pricing with respect to non-indicative services requires consideration of the indicative pricing, the characteristics of the non-indicative service and any commercial or logistical impacts on ARTC. Once pricing is struck with regard to a non-indicative service, it is published and made available to other parties seeking to operate like services under like terms and conditions. ARTC will not differentiate between like services operating in the same end market.

Other characteristics of ARTC's (and similar to other jurisdictions) approach to pricing on the interstate network include:

- Two-part pricing applies in relation to interstate general freight users. Pricing consists of a variable GTK based mass distance charge, and a fixed flagfall charge per train kilometre on a take or pay basis. In some jurisdictions, the flagfall charge is differentiated depending on the operational characteristics of the train.
- The flagfall/variable mix varies between 20:80 and 40:60 for freight services.
- The level of access pricing also varies on different parts of the network, often to reflect cost differentials in service provision, and density of utilisation.
- The rate of return is generally WACC.
- Assets are generally valued using the DORC (or similar) methodology.
- Access charges for general freight are either published by ARTC or generally known in the industry.
- Access charges are generally varied annually by a discount to CPI or through commercial negotiation.
- Pricing is not to be differentiated based on the identity or ownership of the user.

The undertaking permits price differentiation with regard to a range of factors that address the legitimate costs and risks of the access provider only. Differentiation is not permitted where customers operate like services in like markets. ARTC does not support discrimination between a related party and a third party on any grounds other than differences in cost and risk, and would support a transparent 'open book' approach to pricing in this regard.

With regard to the other aims of increasing the extent of above rail competition on its network, ARTC has adopted the principles of efficiency, equity and open-ness in its approach to facilitating access to the network. ARTC's access undertaking largely encompasses these principles. The ACCC has endorsed ARTC unit maintenance costs as being efficient. These unit costs are significantly lower than that achieved on other parts of Australia's public rail network. ARTC sees these principles as providing confidence and encouragement to potential access seekers that they will be able to use the network on an even playing field with other competitors.

Access regimes in all jurisdictions permit pricing on a commercial basis between regulatory floor and ceiling limits, where the floor is represented by the avoidable cost of the traffic activity or segment and the ceiling is the full economic cost of the traffic activity or segment. There are variations in how floor and ceiling limits are treated and determined in each jurisdiction. For example, many jurisdictions utilize a 'combinatorial' rule that seeks to prevent cross-subsidisation of different users on each part of the network.

On the interstate network, pricing is constrained more by intermodal competition in many markets than by regulatory pricing limits. Revenue extracted by infrastructure providers on the interstate network falls short of full economic cost.

ARTC's Growth & Asset Sustainability Strategy

As described earlier, ARTC has sought to set access pricing at a level that will enable rail to be competitive with road in markets served by the interstate network. With the current level of utilization of ARTC's network, however, pricing at the level results in the amount of revenue collected by ARTC not being sufficient for the long-term economic sustainability of its network, valued at a depreciated optimized replacement cost level. It is ARTC's strategy to grow volumes in the long term, such that rail can remain competitive and achieve long-term sustainability of its asset.

Figure 8 below describes the elements and linkages that make up ARTC strategy to achieve long term asset sustainability on the interstate network. Those elements shown in green represent aspects of the interstate rail network markets that ARTC considers that it is able to influence in some way. Through network management, investment, and its approach to network pricing and through efficient improved service delivery, ARTC is seeking to enhance rail competitiveness in interstate freight markets and grow volumes on the network.

Figure 8 ARTC's Strategy for long term asset sustainability

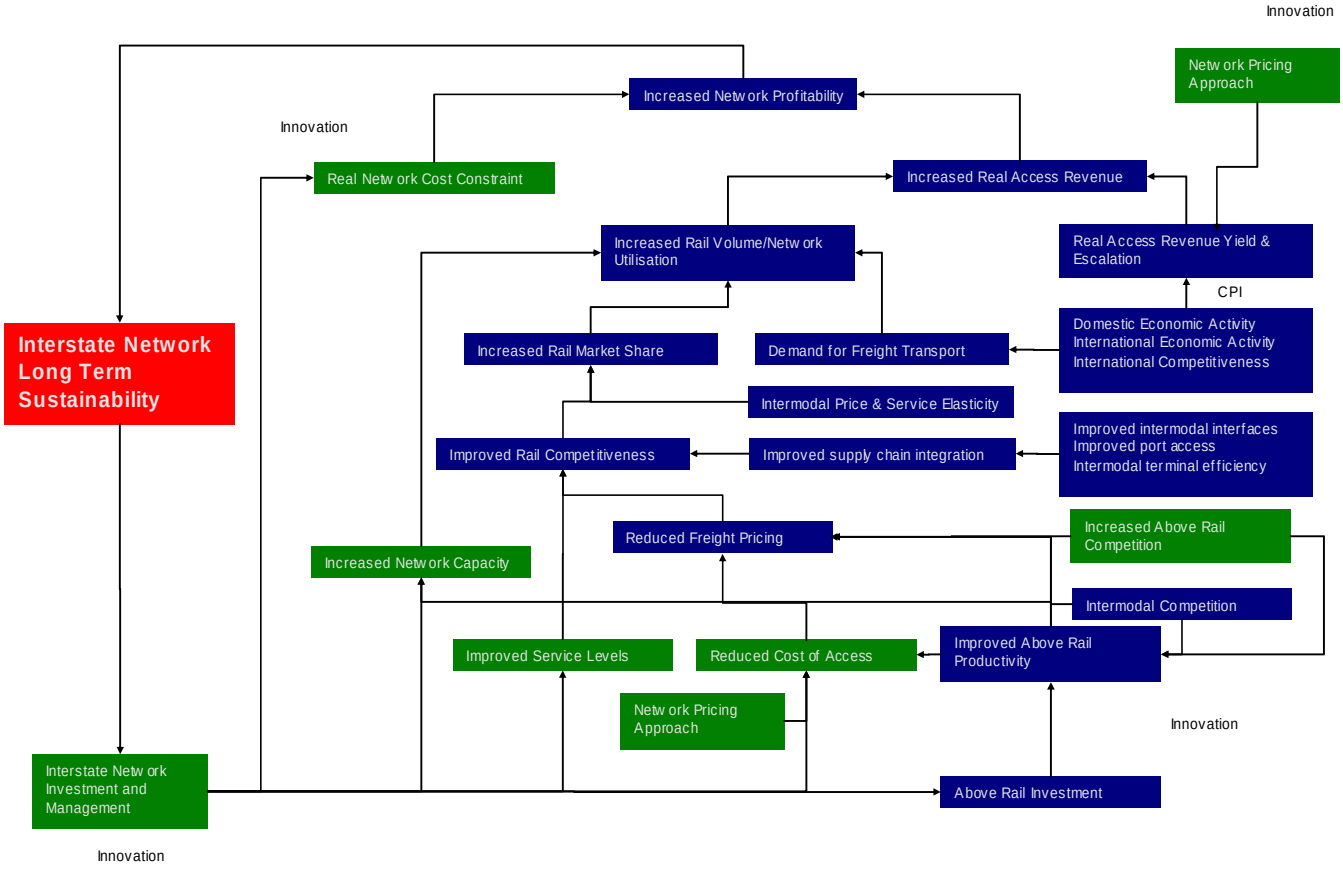
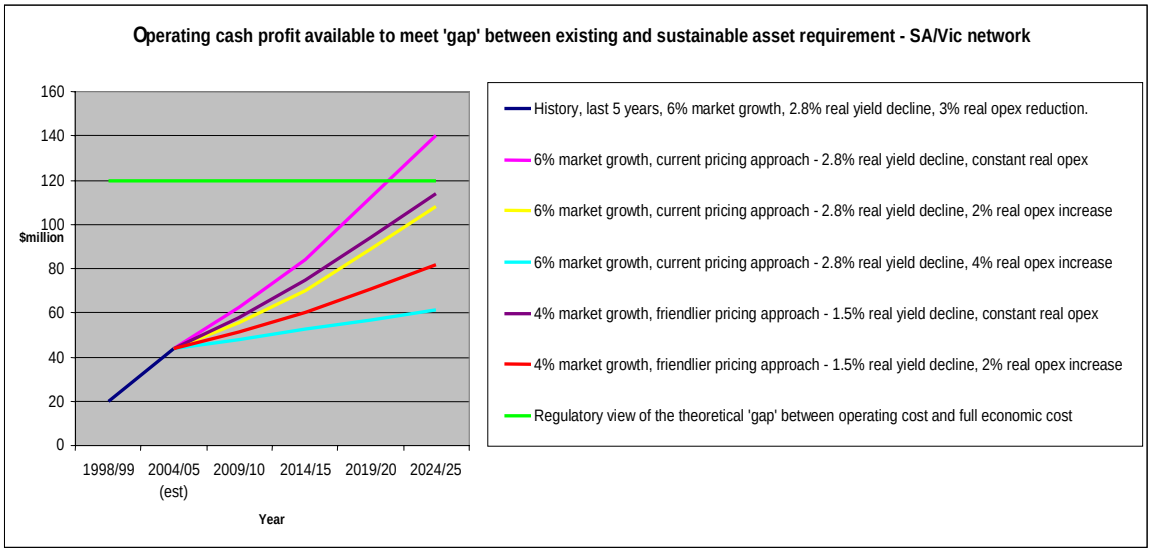


Figure 8 clearly demonstrates that ARTC strategy is underpinned by a competitive element in the market between rail and road modes. For rail to improve its market share in a manner that is efficient and beneficial to the wider transport market and community generally, it is imperative that those competitive elements of the road and rail modes are able to compete equitably and in a manner that delivers efficient infrastructure investment outcomes.

With regard to long term asset sustainability on the interstate network, Figure 9 below shows ARTC cost recovery on the interstate network in SA and Victoria compared to a level considered necessary for long term asset sustainability in a regulatory sense. A range of market and operational scenarios are presented. Under reasonable market, pricing and operating cost scenarios based on the present framework, ARTC considers that utilization of these parts of the interstate network will be sufficient to underpin longer term asset sustainability in about 20-30 years time.

Figure 9



Market assumptions made are clearly dependant on the competition framework in national land transport markets, including intermodal competitiveness.

6. ARTC concerns in relation to existing road user charging approach

6.1 Use of fuel excise as a variable pricing mechanism

Whilst using 'notional' fuel excise as a variable charging mechanism may offer some attraction in the areas of transparency and simplicity, it appears to be universally accepted that this approach does not adequately address the nexus between road usage and expenditure at the heavy long haul segment, and clearly results in under-recovery of expenditure at this end of the market. This results from the fact that a fuel consumption rate does not increase at the same rate mass does, whilst pavement wear is exponentially related to load.

ARTC, and the rail industry generally, believes that a far more efficient means to price the variable (or incremental) aspects associated with road use is to individually charge vehicle for use based on mass and distance. Rail access pricing is predicated on a direct pricing mechanism focused on vehicle mass and distance travelled on the network. In order to achieve a competitively neutral framework for infrastructure pricing where signals for efficient investment exist in both modes, it is important that individual pricing occur, at least where road and rail directly compete.

There is increasing interest in the potential for more direct pricing mechanisms such as technology based mass-distance charging as has been initiated internationally. ARTC believes that moves to implement mass-distance charging in other countries demonstrate that technology is available and is feasible. Whilst the Australian environment may be different to that of other countries, this should not represent a barrier to the available technology.

The rail industry was generally disappointed that the National Transport Commission ("NTC") decided not to pursue individual pricing, underpinned by a technical approach to mass-distance charging, in the 3rd Determination. It is recognized that the are a number of complex issues that need to be resolved with respect to revenue allocations under such an arrangement, whereby the existing fuel excise charging mechanism would be replaced by individual pricing (ARTC understands that this is not a consideration in relation to this Inquiry). Also, overseas evidence suggests that the costs associated with implementing a nationwide, comprehensive technological solution to mass distance charging involving GPS tracking and vehicle weighing technology needs to be addressed.

Furthermore, the use of vehicle tracking technology to support direct pricing will also yield significant benefits in other areas, such as safety and supply chain management. With regard to safety, authorities would be far better placed to ensure vehicle maintenance and operating standards are maintained if vehicle travel patterns could be monitored. The technology can also be used for fatigue management and monitoring compliance with speed limits and restrictions. It can also ensure that actual roads used are tracked and

enable better targeting of road assistance. Certain parts of the existing road fleet have already invested in GPS tracking technology for fleet and supply chain management.

Rail competes against a small proportion (around 10% based on a simple proportion of the larger truck sizes, although some parts of the road industry suggest that the figure is only 4% when route and market limitations are considered, such as exclusion of urban area movements) of the heavy vehicle road fleet involved in the longer haul, heavy end of the market. In the interstate markets, the number of available economic routes for these heavy vehicles is limited. These characteristics may well make the application of technology to mass-distance charging more manageable.

ARTC will consider the use of technology for mass distance charging later in this paper.

6.2 Reliance on national averaging of utilization, costs and consumption rates

The existing approach to allocating expenditure to particular vehicle classes and mechanisms for recovering that expenditure is largely driven by the need for simplicity and transparency, as well as the quality and degree of disaggregation of data made available to the NTC.

ARTC recognises that the NTC has put significant effort into improving the quality and degree of disaggregation of data, but because of the number and impact of the estimations, assumptions and averaging that is still occurring, it is likely that the level of expenditure considered to be related to heavy vehicle usage of road network, and mechanisms for recovery, may be quite different from true levels, and may adversely impact on efficient intermodal competition. When considered in the light of many other estimations, assumptions and averaging made during the attribution, allocation and recovery process, there must be significant doubt about the level of cost recovery of heavy vehicle expenditure.

For example, a significant amount of local roads expenditure is considered as ‘amenity’ related and excluded (around $2.9bn) in the 3rd Determination. This, alone, is significantly more than the amount allocated to heavy vehicles in total. The exclusion is based on survey of historical engineering estimates from local road authorities. A more thorough assessment, difficult as it may be, may well result in a very different outcome for heavy vehicles.

Given this, assertions by the road industry and other agencies that road is paying its way (particularly in the context of certain vehicle classes) must be considered doubtful.

The lack of disaggregation of local roads expenditure made available for pricing determinations may well be the area of greatest uncertainty surrounding existing heavy vehicle charging and adequate cost recovery. As well as assumptions made surrounding the exclusion of ‘amenity’ related expenditure, it is also assumed that an identical process could be used to allocate local road expenditure to vehicle class as was used for arterial

road expenditure. This effectively means that an identical disaggregation by type of maintenance (notwithstanding the exclusion above) and identical drivers of maintenance. ARTC would be surprised if either of these assumptions held true in reality.

ARTC realizes that local road expenditure and usage data made available for historic pricing determinations makes it difficult to appropriately determine a specific approach to estimating the heavy vehicle share of local road costs. ARTC considers that AusLink creates a better framework to develop a more detailed and consistent approach to expenditure and usage data collection.

In rail, access regulation in various jurisdictions demands significant rigour is placed on cost identification and allocation for the purpose of access pricing.

ARTC would expect that individual mass-distance charging would again improve the quality of road usage data, particularly where road and rail directly compete.

6.3 Parameters used to allocate expenditure to vehicle type

Parameters currently used in road are:

- Vehicle kilometres (VKT)
- Equivalent Standard Axle kilometres (ESA-km)
- Passenger Car Unit kilometres (PCU-km)
- Average Gross Mass kilometres (AGM-km)

Allocation rules are claimed to be based on the best scientific information on the relationships between road use and road expenditure needs. Significant debate has occurred in both road and rail as to the appropriateness of the parameters used to allocate certain expenditures to particular vehicle types. This has resulted in changes to the rules being made at each Determination, but often with little certainty, and often driven by political expedience. This adds to significant uncertainty in the expenditures allocated to vehicle types, and whether the outcomes achieved are efficient.

Figure 10 below highlights some of the areas where the cost attribution and allocation approach adopted by the NTC in the 3rd Heavy Vehicle Pricing Determination has a significant impact on outcomes for costs ultimately allocated to heavy vehicles and, in particular, those that compete directly with rail.

Figure 10 3rd Heavy Vehicle Cost Attribution and Allocation

	2nd Determination		3rd Determination Range		
	($million, 1997/98 dollars)	($million, 2005/06 dollars)	($million, 2005/06 dollars)	Nominal Change (per cent)	Real Change (per cent)
Total Road Agency Expenditure	6,420	8,450	10,390	62%	23%
Expenditure recovered through other fees or not associated with motorised road users	1,850	2,440	3,630	96%	49%
Total Costs Allocated to Motorised Vehicles	4,570	6,010	6,760 to 6,870	48% to 50%	12% to 14%
Attributable Costs	1,860	2,450	2,830 to 3,490	52% to 88%	16% to 42%
Non Attributable Costs	2,710	3,560	3,370 to 4,020	24% to 48%	-5% to 13%
Total Costs Allocated to Heavy Vehicles	1,280	1,690	1,640 to 1,870	28% to 46%	-3% to 11%
Attributable Costs	1,060	1,390	1,350 to 1,620	14% to 37%	-13% to 5%
Non Attributable Costs	220	290	250 to 290	19% to 38%	-11% to 4%

Around $2.9bn of this excluded amount relates to local road expenditure believed by the NTC to be related to road amenity rather than road use. It is understood to be based on advice from a survey of local government road engineers

Around 25% of all road expenditure relates to components asset improvement/extension other than relating to pavement and bridge components (land acquisition, earthworks and other expenditure. This is almost entirely considered non-attributable (fixed regardless of level of traffic) and allocated on vehicle kilometres (not mass related). This assumption is based on an Austroads examination in the early 1990's.

Costs are allocated based on a range of parameters, where varying assumptions (often based on intuition and inconclusive evidence) regarding the variability of costs with certain parameters are made by the NTC. Some cost areas are significant. The NTC has indicated that further work is needed to improve the robustness and resolution of allocations.

NTC, Third Heavy Vehicle Road Pricing Determination – Discussion Paper, July 2005

On the interstate rail network, any price differentiation is usually based on train speed and axle load and the impact that these have on maintenance expenditure and network capacity.

6.4 PAYGO approach vis-à-vis Whole of Life Costing

The NTC currently use historical road capital expenditure as a proxy for a capital charge, where 'it is assumed that current expenditure provides a reasonable proxy for annualised costs of providing and maintaining roads for the current vehicle fleet.[2]' This approach is referred to as PAYGO. The NTC indicate that PAYGO is equivalent to annualised costs if[3]:

- The network is reasonably mature and is neither expanding or contracting significantly.
- Across the network there is no overall deterioration in pavement or bridge condition.
- 'Lumpiness' in investment is limited, so that across the network the amount spent on each type of road work does not fluctuate markedly.
- Traffic growth is relatively small and steady.

[2] NTC, 3rd Heavy Vehicle Road Pricing Determination – Draft Technical Report, July 2005.
[3] Ibid.

- The roadwork undertaken, and the road network itself, should be optimal (that is, road investment that is not economically justified does not occur, and that investments that are worthwhile are not deferred.

The BTRE has raised some concerns about whether some of the assumptions underpinning the use of the PAYGO approach are, in fact, true. In particular, the BTRE indicated that it was not clear that certain conditions precedent for PAYGO to be considered to adequately incorporate a return on past capital expenditure, namely a steady state network, had been met.

The NTC has indicated that current construction costs are based on expected traffic levels (fifteen to thirty years) whilst current maintenance costs results from accumulation in pavement and bridge wear over the past fifteen years. PAYGO relies on these effects negating each other. This is a related issue that might suggest there is substance in the BTRE's concerns.

ARTC also has concerns regarding the validity of the assumption that there has been, and there is expected to be, no overall deterioration in pavement or bridge condition. Some industry agencies have suggested that the existing approach may under-estimate the cost of sustaining the network by up to 60%. Further, road networks particularly in urban areas have become more and more congested of the past decade suggesting that investment in roads has not kept pace with growing demand.

The NTC approach averages expenditure of three years to smooth out fluctuations in road capital expenditure in any particular year. The PAYGO approach also requires expenditure to equal depreciation in each year. If it doesn't, then the three year approach will not be equivalent to annualised cost due to the time value of money. The example below demonstrates that the application of PAYGO to road capital expenditure in the period 1998/99 to 2004/05[4] (assuming average road asset life of 10 years and 6% return on investment) resulted in under-recovery over this period of approximately $800m.

PAYGO is unlikely to recover the cost of capital investment, nor provide adequate incentives for efficient future investment. Whilst the PAYGO approach recovers the cost of undertaking an investment, it does not recover the financing or investment cost associated with funding the investment. Depreciation may be recovered, but no return.

The table at Attachment A shows a simplified comparison of road capital expenditure recovery, using actual road data for the period 1998 to 2005[5], using PAYGO, a regulatory asset base approach and an annuity approach. Depending on the discount rate assumption[6], and assuming all historical costs are valued at zero, PAYGO is shown to under-recover road capital expenditure in NPV terms by $600m to $800m.

[4] As reported in the Annual Reports of the NTC for this period.
[5] Ibid
[6] $800m assumes a 6% discount rate, while $600m assumes a 4% discount rate.

As such, PAYGO does not create any incentive for efficient ongoing investment, as this is a direct cost incurred by government associated with the provision of road infrastructure.

On the rail side, the use of a depreciation/rate of return model is quite common. Regulators generally consider this approach recognizes the reasonable commercial interests of the infrastructure owner and users, whilst providing a framework for efficient on-going investment.

Adoption of a similar model on the road side, with particular reference to road freight, would give rise to greater consistency between road and rail infrastructure pricing, resulting in a more efficient and neutral competitive environment.

6.5 Lack of Recovery of Transport Externalities

Current road user charging takes no account of the impact of road use on the external costs of pollution, accidents or congestion. In certain circumstances some costs are internalised through insurance.

Rail infrastructure pricing also does not explicitly recognise any external costs. However, rail internalises more cost than road. For example, insurance does not internalise the cost of damage caused to road equipment from accidents. Rail, on the other hand, is fully responsible for the cost of damage to the rail network as a result of accidents and many disaster events such as flood.

A lack of coordinated research into the costs of accidents, pollution and congestion in the past has been blamed for not incorporating the cost of externalities in infrastructure pricing in the past. Efficient, competitively neutral pricing principles that deliver appropriate investment signals must contemplate the impact of both road and rail use on external elements.

6.6 Lack of productivity improvement incentive

The existing approach to road user charging merely contemplates attribution and allocation of expenditure by the various levels of responsible agencies to road use and vehicle type. Between the 2nd (97/98) and 3rd (05/06) Determinations, road agency expenditure increased by 62% (or 23% in real terms).

ARTC accepts that some of this substantial real increase may have resulted from growth in volumes on the road network, but there is no incentive for (or control over) productivity improvements in the delivery of road maintenance and investment services. Between Determinations, annual road user charges are permitted to be increased by an amount reflecting the annual change in road maintenance expenditure and road usage but capped to CPI.

An efficient approach to infrastructure pricing must incorporate incentives for productivity improvement in the delivery of inputs (maintenance and investment services).

In rail, access regulation normally forces efficient service provision by only permitting efficient costs and asset base to be included in the regulatory cost base framework. Efficiency is determined through either a first principles approach or through industry benchmarking. Delivery of efficient infrastructure provision (and incentives for ongoing improvement) is not featured in the current approach to road user charging, creating inconsistency between modes.

7. The need for efficient and competitively neutral infrastructure pricing

ARTC fully supports the Commission's proposal in its Review of National Competition Policy Reforms that more should be done to ensure that pricing regimes for regulated infrastructure services give appropriate incentives to providers to properly maintain facilities and to advance and augment networks.

In many parts of the rail freight sector, significant gains have been made over the last 10 years though improved operating efficiencies and lower cost structure whilst maintaining or improving the level of service quality and flexibility (as described above). This has resulted in significant benefits to users of the network, end market users and the community generally. This is evidenced by the number of major logistics companies with an appetite for greater involvement in the rail freight sector, directly or indirectly, with a view to leveraging and further improving on the efficiencies already made, and integrating rail into their wider logistics networks.

The freight transport sector is forecast to grow significantly over the next 20 years. For rail to compete and retain or improve its share of this growth, resulting in many indirect benefits for the Australian community, significant investment in the performance of the infrastructure will be needed, among other things (described above). Despite much improved efficiencies in the sector, it is still generally accepted that there has been significant under-investment in rail infrastructure to improve performance and increase capacity on large parts of the network. This situation has not been significantly improved by the application of National Competition Policy, as it currently stands, and accompanying structural, ownership and competitive outcomes on the network.

It is generally accepted in the rail industry that investment in infrastructure gives rise to the greatest returns to the industry and users. That is, $1 invested in infrastructure delivers greater benefit than $1 invested elsewhere in the logistics chain. However, most of the benefits from this investment are derived by the rail operator, rail user and wider community. The National Audit[7] concluded a distribution of financial benefits of the investment program proposed at that time on the north-south corridors to be rail operator (38%), rail customer (34%), society (25%) and track owner (3%).

ARTC believes that the AusLink approach, which is focused on sustainable transport investment and triple bottom line evaluation, requires a stronger link between infrastructure investment and pricing. This will give rise to greater transparency, accountability and efficiency of investment and will require pricing of infrastructure for all modes to be efficient, competitively neutral and incorporate social impacts. This requirement is likely to materialize sooner rather than later, and the transport industry will need to be prepared for this.

[7] Interstate Rail Network Audit, Booz Allen Hamilton for ARTC, April 2001.

AusLink also promotes a more integrated approach to infrastructure planning and investment by developing an improved definition of the national transport network that is more focused on market requirements of the Australian transport network and away from physical characteristics such as infrastructure type (road or rail). Investment evaluation to meet the needs of markets rather than 'engineers' and will also require more consistency in pricing of infrastructure between modes.

Other areas of improvement in infrastructure pricing required to support a stronger link with infrastructure investment include:

- Improved information about infrastructure usage and expenditure in urban areas.
- Improved information on usage and expenditure by infrastructure type, region and transport corridor.
- Improved information about wear and congestion effects of user types and changes in standards.
- Improved information on road and rail interfaces at terminals and ports and the effects of pricing on efficiency of these linkages.
- Increased agency discipline/incentive and technology (GPS) are key elements to improving investment signals.

ARTC considers that two important elements that must be in place in order to establish and efficient and integrated framework for investment in the freight transport sector are competition and minimisation of subsidy by the wider community. ARTC accepts that there are certain markets and infrastructure provision that are uneconomic and exist be way of community service. Where it is a policy decision not to recover the full economic cost of infrastructure usage from the direct and indirect beneficiaries of that infrastructure, then government subsidy should be made equitably and transparently, so as not to distort efficient usage and investment outcomes. Subsidies should be applied on a competitive basis.

In many freight markets where road and rail compete (and are also complementary service providers) it is important, to ensure investment is efficient, that infrastructure pricing does not inhibit competition in any way, and seeks to maximise recovery of the efficient cost of service provision.

ARTC considers it important that, in order to create an effective and efficient land transport system in Australia, healthy competition between and within transport modes is essential. This, in turn, will give rise to optimal utilization of transport infrastructure supporting the freight logistics industry, as well as better decision-making regarding future development of the infrastructure.

A framework for healthy and economically efficient competition relies upon the availability of infrastructure on competitively neutral terms and conditions, accurately reflecting the economic cost of the use of that infrastructure and designed to promote the efficient use of, and investment in, transport equipment and the infrastructure. This has been highlighted in a number of major transport inquiries undertaken by the Australian Government over the last decade. One of the recommendations of the Neville Committee's inquiry (1998) was "… that the Commonwealth develops a more consistent, equitable approach to transport infrastructure pricing to ensure competitive neutrality between modes."

Eliminating differences between the methodologies used to determine road and rail infrastructure charges is an important part of ensuring competition between transport substitutes is not inhibited. The achievement of competitive neutrality is therefore an important element of an efficient infrastructure pricing regime that delivers appropriate signals to the investment community.

8. Important elements of an efficient and competitively neutral pricing regime

There should be a **single regulatory objective**, ideally efficiency in the use, provision of and investment in, road and rail infrastructure. It is also necessary to have regard to the impacts on competition in the road and rail freight market (between and within markets), when designing a road and rail infrastructure charging regime.

Regulatory regimes in relation to both road and rail pricing focus, to varying extent, on efficiency in the use of road and rail infrastructure. Rail, in particular, also focuses on minimising the cost of infrastructure provision. Existing objectives (particularly road) do not explicitly focus on the promotion of efficient investment in infrastructure, or on the promotion of competition between and within freight modes. Both of these elements are necessary to promote an efficient land transport industry.

Existing objectives in relation to both road and rail pricing are multiple, and often involve trade-offs between competing needs, which can create uncertainty and sub-optimal outcomes. Ideally, regulatory regimes for both road and rail pricing should have a single objective that ensures there is certainty, consistency and clarity in the regulatory purpose, thereby minimising the scope for differences in regulatory impact on competition between modes, in particular.

ARTC considers that it is important to maximise efficiency in the provision of, use and investment in road and rail infrastructure in addition to efficiency in the freight transport market, to ensure that the regulatory approach to determining pricing is consistent between modes, so that competition between and within modes is promoted, to the benefit of freight transport users.

Full economic cost recovery (including social costs) to underpin investment triple bottom line investment decisions should be the long term goal. ARTC's approach to growth and asset sustainability recognises full economic cost recovery as a long term goal. This approach assumes long term asset sustainability is achievable through growth in asset utilisation rather than through growth in pricing.

In the first instance (short term), however, it is important that **pricing of road and rail be based on the same economic criteria**. This would require the following elements to be achieved.

- With full economic cost recovery being the long term objective, a ceiling revenue limit should be set based on efficient operating costs, incremental social cost, depreciation and a return on an efficient level of asset provision. ARTC accepts that in the short term, it is likely that neither rail, nor road, will be able to achieve this long term target. Pricing for both road and rail should be set at a level that will maximise the extent of recovery of full economic cost and, where competition

exists between the modes, will ensure that both modes are priced to recover the same proportion of capital cost. As increased utilisation of the network results from competitively neutral competition, infrastructure will move closer to full economic cost recovery. The mode that is able to deliver better, and more efficient, transport outcomes in any market will be able to generate revenue to finance investment in the infrastructure.

- Return of/on asset should be based on same valuation principles, rate of return should be based on relative commercial risk profile.

- Recovery of social cost should be recognised, to the extent not already internalised.

- Allocation of cost should reflect causality.

- Cross-subsidisation between users, and parts of each network, should be minimised.

- There should be incentives for efficiency improvement in service delivery of inputs. Where pricing is not constrained by the full economic cost of service provision, then pricing needs to be constrained to reflect productivity improvement in service provision. Of course, the degree of required productivity improvement needs to reflect the mechanism of service delivery. Where this is undertaken on an open and competitive basis, productivity improvement will flow in any event. Where this is not the case, funding of service delivery needs to incentivise providers to achieve productivity gains.

- Mechanisms for charging should be similar, where individual pricing of use is the objective. ARTC considers that two part pricing represents an appropriate structure for pricing to achieve efficient use of infrastructure.

- Impact of differential use on infrastructure maintenance and capacity and environment should be priced on a marginal basis so as to provide price signals for investment.

- All of the above should be designed so as to not distort competition on the competitive elements (above-rail/above-road, within modes) of each mode. As an example, the variable/fixed pricing mix inherent in two part pricing needs to contemplate the objective of encouraging competition between and within modes. Two part pricing can act as a barrier to entry to markets where the fixed element is high.

- Any government subsidy that could distort markets should be minimised, or at least transparent, equitable and competitively applied.

Infrastructure investment & planning should be based on economic (triple bottom line) criteria. Investment planning should be carried out on a network/corridor basis (where transport services are provided to a market or markets) vis-à-vis planned on a modal basis. There should be a long term focus on the development and sustainability of transport infrastructure. Investment should be undertaken on an equitable, rigorous and transparent triple-bottom line economic basis. In the long term, both road and rail investment would be underpinned by through economic cost recovery (infrastructure provision would effectively operate as a 'business'). In the short term, achievement of this outcome is best underpinned by efficient, and competitively neutral, pricing of infrastructure usage.

ARTC supports the principles underpinning the AusLink framework as a mechanism to deliver efficient and effective investment solution for the transport industry.

Cost allocation, pricing and investment process should be underpinned by **high quality and specific data collection.** Technology advancements such as satellite tracking offer one of many ways to improve the quality of information on which to base transport pricing and investments decisions (as well as a range of other benefits). In addition, agencies responsible for data collection should be given incentives and tools to improve information collection mechanisms.

National basis for economic and safety regulation for both modes. In order to achieve competitive neutrality between road and rail modes, it is necessary to increase the level of consistency and certainty in regulatory treatment across jurisdictions. This is particularly relevant to the rail mode where safety and economic regulation is largely undertaken by state based jurisdictions. Road pricing and safety regulation, whilst not perfect is much closer to being undertaken on a national basis.

Rail needs to have a single national regulator in respect of economic and safety regulation (although these do not necessarily need to be one and the same). It is important that the regulatory objectives and mechanisms be consistent.

In any event, economic regulators need to operate independently from government decision making. ARTC considers that this would result in greater transparency and efficiency where governments sought to address and influence specific transport outcomes through the use of subsidies.

9. Some mechanisms for delivering efficient and competitively neutral infrastructure pricing

9.1 Technology based mass-distance charging for road

There is increasing interest in the potential for more direct pricing mechanisms such as technology based mass-distance charging as has been initiated internationally. ARTC believes that moves to implement mass-distance charging in other countries demonstrate that technology is available and is feasible. Whilst the Australian environment may be different to that of other countries, this should not represent a barrier to the available technology.

The NTC decided not to pursue individual pricing underpinned by a technical approach to mass-distance charging, in the 3rd Determination. Reasons for this were cited as the difficulties and costs associated with applying overseas experience to Australian conditions, and complex issues that would need to be resolved with respect to revenue allocations under such an arrangement, whereby the existing fuel excise charging mechanism would be replaced by individual pricing. ARTC understands that the latter reason is not a consideration in relation to this Inquiry.

ARTC recognises that the feasibility in terms of costs and benefits of a technological solution to implement mass-distance charging needs to be assessed. In this regard, it should be noted that the benefits of GPS tracking and vehicle weighing technology extend beyond the improvement of pricing and investment signals, and assisting in the delivery of competitive neutrality between modes. With regard to safety, authorities would be far better placed to ensure vehicle maintenance and operating standards are maintained if vehicle travel patterns could be monitored. Certain parts of the existing road fleet have already invested in GPS tracking technology for fleet and supply chain management. This would suggest that, at least on a smaller scale, this adoption of this type of technology can be justified commercially, even in relation to benefits other than pricing and investment.

ARTC notes that the NTC is currently undertaking a substantial review of options and feasibility for technologic solution for mass distance charging of heavy vehicles.

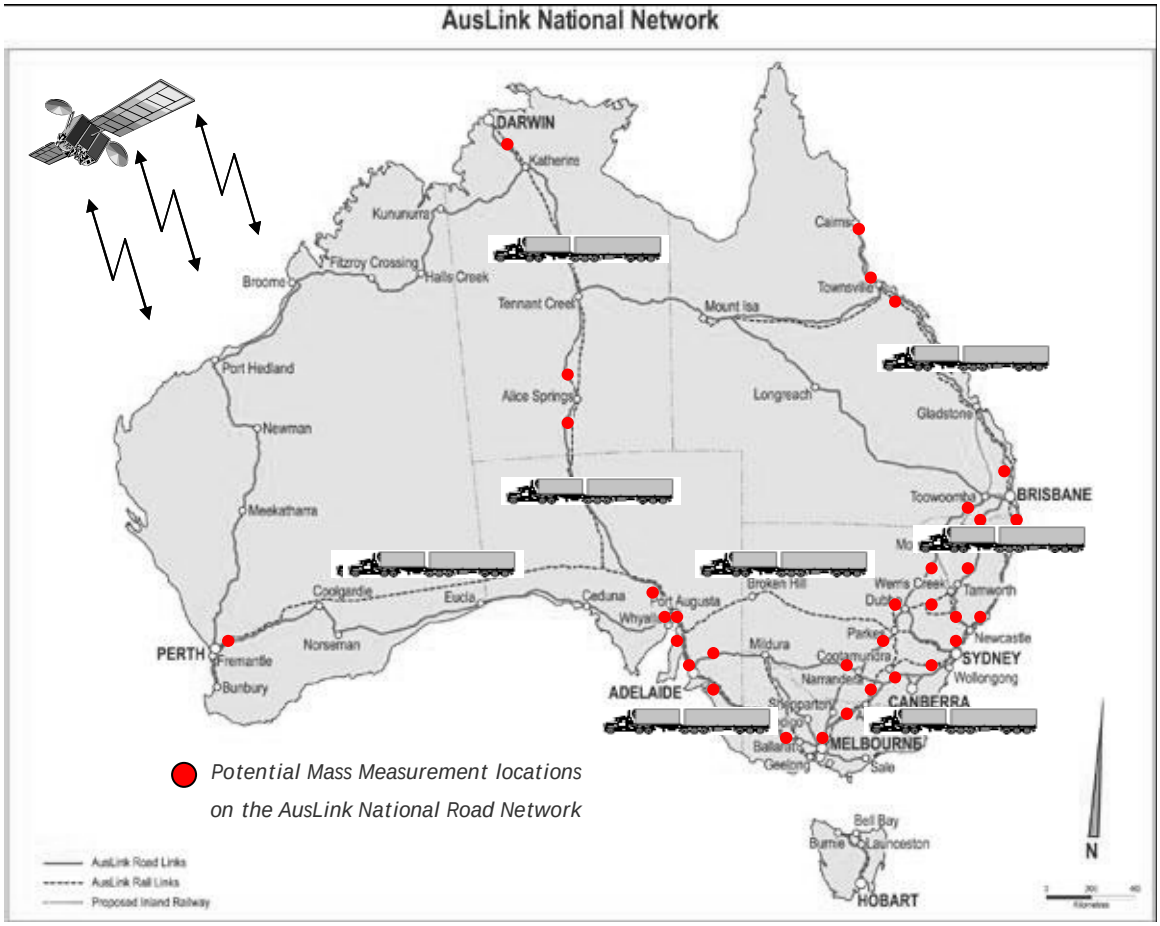
ARTC believes that there is some potential for the application of technology to deliver mass distance charging by the adoption of a suitable approach in a smaller scale in the first instance. It is generally accepted that the priority for mass distance charging (competitive neutrality) relates primarily to those areas where road and rail directly compete. Those markets where competition is strongest between road and rail are the longer distance interstate freight markets.

ARTC puts to the Commission that the feasibility of the use of technology (e.g. GPS tracking and vehicle weighing) may be highest, and benefits greatest if applied to these

markets. Such markets are somewhat simpler in relation to fleet use and route selection to the point that application of technology on a pilot basis represents an attractive introduction to wider application in the long term.

Other benefits described earlier also add to the attraction for industry take-up.

Figure 11 Potential initial application of mass distance charging



Initial focus to the competitive interstate freight markets limits the extent of the fleet participation to around 4% (road industry estimate of the rail competitive component). It may be that the interstate market involves an even smaller proportion where road also competes in a number of regional export markets. Application could also focus on only those elements of the national network defined by AusLink as predominantly serving these markets. Figure 11 above describes, in broad terms, a potential 'pilot' application of mass distance charging. Clearly locations for mass measurement locations would require a detailed assessment.

NTC figures show that the number of heavy vehicles is around 350,000. Of this fleet 57,000 vehicles are articulated, and only 11,000 are vehicles are B-Double or Road Train configuration (that could directly compete in interstate markets). A smaller number may 'actually' compete in interstate markets. Such vehicles would need to register to be able

to undertake this task, and participate in a tracking program, and carry whatever on-board technology is required for mass measurement.

The AusLink national network identifies between one and three to four 'routes' used to connect key interstate locations. In any event, road expenditure and capital for these routes would be allocated to vehicle usage by registered vehicles. Cost allocation would improve with the use of the technology.

Mass measurement could be undertaken at certain key locations (with each end of any route being monitored as a minimum).

Over time, as the markets and road users developed, additional technology could be installed incrementally to address more and more competitive markets. To deliver benefits other than competitive neutrality, program expansion to non-competitive elements of the fleet could be undertaken in the longer term.

ARTC recognises that there are likely to be a number of issues and constraints that would need to be addressed in assessing the feasibility and effectiveness of the proposed approach, even on a pilot basis. Nevertheless, application of the underlying principles warrants serious consideration as a short to medium term solution in ARTC's opinion.

Whilst ARTC considers that the proposed application represents a 'first best' solution, alternatives for either mass measurement or distance and location measurement have been identified by the NTC as described below.

<u>Alternatives for mass measurement</u>

- Dynamic vehicle based weighing using on-board measuring units. This option is being tested but not widely used. On-board units cost in the vicinity of $20,000.

- Participation in the National Heavy Vehicle Accreditation Scheme (NHVAS) mass management module, modified to include recording of mass for each trip and regular calculation and reporting of additional mass carried, backed up by independent auditing.

- Installation of weigh in motion devices on affected routes along with transponders on participating vehicles. Allows vehicles to be automatically identified by the weigh in motion devices. Located at certain locations. Combine with transponders to identify vehicle at point of weighing (or use satellite identification). This is the alternative adopted in the proposed pilot.

- Assessed mass levels by vehicle class. No direct measurement of individual vehicle masses. Based on maximum loading or average loading.

- Self declaration of the vehicle mass. Relatively simple to administer, but needs effective auditing & checking. Frequent roadside enforcement.

Alternatives for distance & location measurement

- A declaration system. Operators declare what distance they will travel and where that travel will occur.

- Telematics (GPS based). Using map referencing to monitor location and calculate distances travelled, based on information in electronic maps about distances between points. This is the alternative adopted in the proposed pilot.

- Gantries. Record each time a vehicle passes a specific location on the road network. May be physical or virtual, and may use a variety of technologies to identify vehicles as they pass the gantry, including cameras and electronic transponders (as in the Melbourne Citylink tollway). Distance is measured by checking which gantries a vehicle passes across the network, where the distances between each pair of gantries is known.

- Hubodometers. Attached to the vehicle axle and record distance travelled as the axle rotates. Not on their own are not able to monitor location.

- Assessed distance by vehicle class. Make an assumption about the likely distances to be travelled by vehicles and where this travel would be expected to occur.

9.2 Competitively neutral pricing framework and full economic cost recovery

ARTC has already described those elements necessary for a competitively neutral infrastructure pricing framework. Specifically in relation to full economic cost recovery, ARTC proposed that this could be considered to be a long term objective. It has been said that moving to this level of pricing in the short term may be politically unachievable. Moving to pricing of road and rail be based on the same economic criteria in the short term is likely to be more acceptable politically.

ARTC has previously suggested that, with full economic cost recovery being the long term objective, a ceiling revenue limit should be set based on efficient operating costs, incremental social cost, depreciation and a return on an efficient level of asset provision. In the short term, pricing for both freight road and rail that will minimise the extent of subsidy by the wider community and, where competition exists between the modes, ensure that both modes are priced to recover the same proportion of capital cost, is achievable. As increased utilisation of the network results from competitively neutral competition, infrastructure will move closer to full economic cost recovery. The mode that is able to deliver better, and more efficient, transport outcomes in any market will be able to generate revenue to finance investment in the infrastructure.

To this end, ARTC considers it appropriate that the Productivity should undertake estimation of the full economic cost of road and rail provision, using DORC valuation principles. This should focus on the infrastructure used by both modes where in competition. By proper allocation for cost to those vehicles competing with rail, a comparison of the extent of full economic cost recovery could be undertaken.

Given the time frame available to the Commission, ARTC is not suggesting a highly detailed analysis be undertaken in the regard. A benchmarking exercise may be more appropriate in the context of this Inquiry, and would be instructive in identifying the current extent of cost recovery. More detailed analysis could be undertaken during implementation.

9.3 Investment and planning

ARTC supports the principles underpinning the AusLink framework as a mechanism to deliver efficient and effective investment solution for the transport industry. This framework can be enhanced by:

- Infrastructure pricing that is competitively neutral, maximises the extent of full economic cost recovery, and has full economic cost recovery as the long term objective.

- Improved agency data collection and reporting.

In relation to the latter, technology advancements such as satellite tracking offer one of many ways to improve the quality of information on which to base transport pricing and investments decisions (as well as a range of other benefits). In addition, agencies responsible for data collection should be given incentives and tools to improve information collection mechanisms.

9.4 Recognition of social cost of infrastructure usage

ARTC accepts that there has historically been a lack of coordinated research into the costs of accidents, pollution and congestion in the past. Overseas research, particularly in Europe has been more significant, but may have applicability issues in relation to Australian environmental condition. Significant useful work has been undertaken in recent years (eg BTRE, Victorian Department of Infrastructure, QR and other agencies) sufficient to ascertain at least a nominal initial treatment for both modes that can be improved upon over time. AusLink investment evaluation principles have sought to incorporate quantified environmental impacts and may be useful in this regard.

The inclusion of nominal charging for externalities on both modes (net of internalised cost) will create greater awareness and impetus for improved assessment of these costs, through more refined research over time.

9.5 Competitively neutral and consistent regulatory framework

ARTC has previously indicated that economic and safety regulation in rail should by centralised in a national framework. ARTC has promoted this position for a number of years.

The Council for Australian Governments ("COAG") is developing a new Competition Policy Reform Agenda ("Agenda"). A number of commitments and studies were initiated at the last COAG meeting in February 2006 to assist with the development of the new reform agenda. Of particular relevance is:

- An agreement on adopting the ARTC access undertaking as a national approach for all major freight rail lines;
- Development of a program to harmonise and reform rail and road regulation;

Whilst the COAG Agenda contemplates greater consistency in access and safety regulation between jurisdictions, ARTC notes that it falls short of proposing a single national regulatory body, particularly in relation to economic regulation.

Rail needs to have a single national regulator in respect of economic regulation. It is not necessary that the same regulatory body be used for both modes. It is more important that the regulatory objectives and mechanisms be consistent. In any event, economic regulators need to operate independently from government decision making. ARTC considers that this would result in greater transparency and efficiency where governments sought to address and influence specific transport outcomes through the use of subsidies.

ARTC would strongly support a recommendation by the Commission to adopt the ACCC as the single economic regulator for the national rail network. This would deliver the required consistency and independence in access regulation and pricing.

It has been argued in the past that the ACCC lacks sufficient industry knowledge and experience to undertake such a role. ARTC does not necessarily see this as a disadvantage. In any event, the development of a dedicated component of the ACCC to economic regulation in rail would ultimately lend itself to independence (or separation) in the longer term, whilst retaining important exposure to regulatory practice in other infrastructure industries.

10. Other impediments to efficient operation of transport infrastructure

The Productivity Commission has also sought views on major impediments, other than price, to efficient use of road and rail freight infrastructure. ARTC welcomes the Commission's recognition that achieving competitive neutrality will not, by itself, deliver an efficient transport industry. There are many other impediments to achieving efficiency in transport operations. Some of these are best dealt with through regulatory intervention, whilst others are best left to market forces.

The NTC undertook a study in 2004 called 'Impediments to Improving Efficiency in the area of Intermodal Transport.'[8] This study is particularly relevant to this question where the NTC identifies for industry comment a range of impediments to efficiency and the role regulation should play in removing these impediments.

The Discussion Paper addressed a number of the impediments to the efficiency of intermodal transport as follows:

- Use of Non-Standard Containers
- Differing Mass and Dimension Limits between Modes
- The Use of the Australian Pallet Size
- Exchange of Information
- Coordination of Working Arrangements
- Differing Accreditation Schemes
- Terminal Access
- Ongoing Certainty of Land Use Arrangements
- Unbalanced Policy Development & Investment Decisions
- Other Issues including regulatory difference, infrastructure quality, taxation arrangements, track access, road pricing and industry training & development

ARTC's views, as submitted to the NTC, as provided at Attachment 2.

[8] http://www.ntc.gov.au/filemedia/Reports/ImpedimentsIntermodalAug2004.pdf

11. ARTC's recommendations

In this submission, ARTC has sought to provide detail of the Commission of existing competitive framework on the interstate rail network, and ARTC's current approach to access pricing and asset sustainability on the interstate rail network.

ARTC has identified a number of concerns it has with the current approach to heavy vehicle road user charging, many of which give rise to an inconsistent approach to road and rail infrastructure pricing. ARTC has not suggested that the approach to pricing of rail infrastructure is perfect, but it provides a better framework for the improvement in cost recovery and ultimately full economic cost recovery in the long term.

ARTC considers that two important elements that must be in place in order to establish and efficient and integrated framework for investment in the transport sector are competition and maximisation of cost recovery. To achieve this, ARTC recommends to the Commission the following elements of an efficient and competitively neutral pricing regime:

- There should be a **single regulatory objective**, ideally efficiency in the use, provision of and investment in, road and rail infrastructure. It is also necessary to have regard to the impacts on competition in the road and rail freight market (between and within markets), when designing a road and rail infrastructure charging regime.

- **Full economic cost recovery (including social costs)** to underpin investment triple bottom line investment decisions should be the long term goal.

- In the first instance (short term), it is important that **pricing of road and rail be based on the same economic criteri**a.

- **Infrastructure investment & planning should be based on economic (triple bottom line) criteria.** Investment planning should be carried out on a network/corridor basis (where transport services are provided to a market or markets) vis-à-vis planned on a modal basis. There should be a long term focus on the development and sustainability of transport infrastructure. Investment should be undertaken on an equitable, rigorous and transparent triple-bottom line economic basis. In the long term, both road and rail investment would be underpinned by through economic cost recovery (infrastructure provision would effectively operate as a 'business'). In the short term, achievement of this outcome is best underpinned by efficient, and competitively neutral, pricing of infrastructure usage. ARTC supports the principles underpinning the AusLink framework as a mechanism to deliver efficient and effective investment solution for the transport industry.

- Cost allocation, pricing and investment process should be underpinned by **high quality and specific data collection**.

- There should be a **national basis for economic and safety regulation for both modes**.

ARTC recognises that the achievement of an efficient and competitively neutral infrastructure pricing regime is not a simple exercise and may be a long term development. ARTC recommends that the Commission, in the first instance, should focus on those aspects of road and rail infrastructure where competition exists. The Commission should also not seek to achieve precise accuracy in the first instance. In the long run, technology and market developments could create a natural impetus for expansion to the wider transport network. In particular, ARTC makes the following recommendations in relation to implementation of mechanisms to deliver efficient and competitively neutral infrastructure pricing.

- **Technology based mass-distance tracking for road.** ARTC believes that there is some potential for the application of technology to deliver mass distance charging by the adoption of a suitable approach in a smaller scale in the first instance. Initial focus to the competitive interstate freight markets limits the extent of the fleet participation to around 4% (road industry estimate of the rail competitive component). Application could also focus on only those elements of the national network defined by AusLink as predominantly serving these markets. It should be noted that the benefits of GPS tracking and vehicle weighing technology extend beyond the improvement of pricing and investment signals, and assisting in the delivery of competitive neutrality between modes. With regard to safety, authorities would be far better placed to ensure vehicle maintenance and operating standards are maintained if vehicle travel patterns could be monitored. Certain parts of the existing road fleet have already invested in GPS tracking technology for fleet and supply chain management.

- **Competitively neutral pricing framework and full economic cost recovery.** ARTC has proposed that this could be considered to be a long term objective. Moving to pricing of road and rail be based on the same economic criteria in the short term is likely to be more acceptable politically. To this end, ARTC considers it appropriate that the Productivity should undertake estimation of the full economic cost of road and rail provision, using DORC valuation principles. This should focus on the infrastructure used by both modes where in competition. By proper allocation for cost to those vehicles competing with rail, a comparison of the extent of full economic cost recovery could be undertaken.

- **Investment and planning**. ARTC supports the principles underpinning the AusLink framework as a mechanism to deliver efficient and effective investment solution for the transport industry. This framework can be enhanced by infrastructure pricing that is competitively neutral, maximises the extent of full

economic cost recovery, and has full economic cost recovery as the long term objective, and improved agency data collection and reporting.

- **Recognition of social cost of infrastructure usage**. Significant useful work has been undertaken in recent years (eg BTRE, Victorian Department of Infrastructure, QR and other agencies) sufficient to ascertain at least a nominal initial treatment for both modes that can be improved upon over time. AusLink investment evaluation principles have sought to incorporate quantified environmental impacts and may be useful in this regard. The inclusion of nominal charging for externalities on both modes (net of internalised cost) will create greater awareness and impetus for improved assessment of these costs, through more refined research over time.

- **Competitively neutral and consistent regulatory framework**. Rail needs to have a single national regulator in respect of economic regulation. This would deliver a comparable framework to that used for road. It is not necessary that the same regulatory body be used for both modes. It is more important that the regulatory objectives and mechanisms be consistent. In any event, economic regulators need to operate independently from government decision making. ARTC would strongly support a recommendation by the Commission to adopt the ACCC as the single economic regulator for the national rail network. This would deliver the required consistency and independence in access regulation and pricing.

Further detail in relation to these recommendations is provided at Section 9.

ATTACHMENT A

Simplified comparison of road capital expenditure recovery methodologies ($ million, 2004/05)

	1988/89	1999/2000	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2012/13	2013/14	2014/15	Total	NPV
Regulatory asset base																		
Opening value	0	2305	4396	6302	7747	8956	9938	10763	8966	7169	5372	3831	2551	1539	776	262		
Capital expenditure	2561	2609	2692	2480	2491	2517	2623	0	0	0	0	0	0	0	0	0	17972	14342
Depreciation	256	517	786	1034	1283	1535	1797	1797	1797	1797	1541	1280	1011	763	514	262		
Closing value	2305	4396	6302	7747	8956	9938	10763	8966	7169	5372	3831	2551	1539	776	262	0		
PAYGO	854	1723	2620	2593	2554	2496	2544	1713	874	0	0	0	0	0	0	0	17972	13545
Regulatory asset base approach																		
- Return	0	138	264	378	465	537	596	646	538	430	322	230	153	92	47	16	4852	3153
- Depreciation	256	517	786	1034	1283	1535	1797	1797	1797	1797	1541	1280	1011	763	514	262	17972	11189
Total	256	655	1050	1412	1748	2072	2393	2443	2335	2227	1863	1510	1164	855	561	278	22824	14342
Renewals annuity	1419	1419	1419	1419	1419	1419	1419	1419	1419	1419	1419	1419	1419	1419	1419	1419	22707	14342

ATTACHMENT B

Excerpt from ARTC's Submission to the NTC in response to the 'Impediments to Improving Efficiency in the area of Intermodal Transport' Discussion Paper (2004)

Use of Non-Standard Containers

ARTC recognises that markets require the use of non-standard (ISO) containers and the usage of such containers is growing. This has led to the development of specialised rail wagons.

Where rail capacity is insufficient to match the extent of non-standard usage, the ability of rail operators to optimise loading on wagons, and train productivity is constrained. This increases cost to the rail sector (including below rail unit cost) and reduces rail competitiveness. Further, the usage of non-standard containers is likely to reduce capacity and productivity at the road rail interface (terminal).

At this time, ARTC is not aware of any differential below rail pricing with respect to non-standard containers, outside of that which would arise from existing mass based pricing.

Whilst ARTC would welcome any initiative that would improve wagon loading productivity and so improve rail competitiveness, ARTC expects that this would largely be driven by market forces giving rise to innovation in wagon development and loading, than through some form of regulated standardisation.

Differing Mass and Dimension Limits between Modes

The rail infrastructure owner will seek to recover any incremental cost (damage, capacity) incurred as a result of operations above existing corridor limits. Such operations will result from a commercial decision.

ARTC is of the view that road pricing should similarly seek to cover incremental cost from users seeking to gain productivity benefits from operating in excess of existing limits.

The Use of the Australian Pallet Size

Whilst ARTC would welcome any initiative that would improve container and wagon loading productivity and so improve rail competitiveness, ARTC expects that this would largely be driven by market forces giving rise to innovation in wagon and container development and loading, than through some form of regulated standardisation.

Exchange of Information

ARTC agrees that the costs associated with information exchange resulting from system inter-operability, the lack of relevant information and the timeliness of the provision of relevant information represent a significant impediment to improved transport efficiency throughout the transport logistics network.

Many previous attempts to improve the availability and timeliness of information have only been partially successful (covering only a small part of the supply chain), largely resulting from a narrow view of the transport and distribution task being taken. ARTC believes that market forces and competition will demand a widening of focus in this area.

ARTC supports recent initiatives by the Australian Logistics Council (adoption of EAN.UCC open universal global standards for communication, data collection and exchange between supply chain partners). ARTC also supports the use of '1-stop' and third party service providers in this area as being an efficient means of achieving greater exchange.

ARTC agrees that greater industry understanding of e-business will be necessary in order for the transport industry to react to market demand in this area.

Coordination of Working Arrangements

ARTC agrees that mismatching hours of operation between different parts of supply chains is an impediment to improved transport efficiency. Among other things this manifests in urban areas around ports where peak congestion and delays occur, as well as staging of container movements between the port and warehouses.

Recent port and container origin and destinations studies in many capital cities provide significant insight into the magnitude of inefficiencies in these transport tasks.

Market forces will force the industry to seek the best commercial alternative between staging to smooth out peaks and troughs or otherwise (changing shipper operating hours). ARTC agrees that regulatory intervention may create inflexibility.

ARTC believes that inland hubbing offers an alternative efficient outcome that also achieves other government objectives (urban congestion, environmental etc).

Differing Accreditation Schemes

ARTC agrees that different accreditation requirements between jurisdictions add significant cost and complexity to all parts of the national transport logistics network.

ARTC's objective is to create a single framework for rail safety rules and codes of operational practice on the national railway between Brisbane and Perth. To date, ARTC has sought to improve the level of consistency between regulations in each state, and has actively lead implementation of National Codes of Practice. ARTC's lease of the interstate rail network in NSW will improve opportunities to develop consistent regulation on the interstate network.

ARTC supports the NTC in its efforts to create a national approach to rail safety regulation in Australia.

Terminal Access

ARTC recognises that access to intermodal terminals (capital city and regional) and ports represents an essential component of entry to the interstate and regional rail network.

ARTC shares the concerns of many industry participants that where such a facility is owned or controlled by a vertically integrated service provider that does or would compete with other service providers, it is likely that effective competition will be constrained. Duplication of such facilities, particularly in and around capital cities, whilst technically feasible in some circumstances, often represents an insurmountable barrier in normal circumstances due to insufficient scale of operations.

ARTC is not convinced that access regulation alone is a sufficient remedy in these circumstances. ARTC believes that structural separation represents a better means to limit anti-competitive behaviour, and so encourage market entry and competition in many circumstances including interstate transport. The operation of multi-user terminals with competing users is likely to yield greater benefit to the intermodal interface than the possible efficiency improvement through integration in many cases.

Privatisation of state based railways on a vertically integrated basis (with an accompanying access regime) have been far from convincing to date in the context of investment and competition.

Ongoing Certainty of Land Use Arrangements

ARTC agrees that land use planning practices have been somewhat disjointed, indiscriminate and politically driven. This creates uncertainty for investment in efficient transport infrastructure.

ARTC welcomes recent initiatives in some capital cities to develop longer-term transport plans. These will at least provide a better framework for the recognition of strategic freight transport needs in capital cities.

ARTC welcomes the AusLink initiative to further focus State and local governments on the long-term needs of the national and key regional transport networks.

ARTC considers that new transport infrastructure should be paid for by the beneficiaries (direct and indirect) of that infrastructure, including developers of residential areas benefiting from the transfer of transport facilities and congestion to other areas.

Unbalanced Policy Development & Investment Decisions

ARTC welcomes the Australian Government's AusLink program as a framework for addressing a range of industry concerns, inefficiencies and inconsistencies in the area of transport infrastructure and investment. Characteristics of the AusLink framework include:

- National, longer term network/corridor focus
- Transparency, rigour and accountability
- Consistency, equity and sustainability
- Continuous improvement and value for money

This reflects the approach ARTC has taken in the conduct of its own business operations.

The NTC has taken the view that it is the market's role to determine the optimal use of road and rail modes to fulfill the transport task. Whilst ARTC agrees with this, the market would operate within the framework of road and rail investment programs that are driven more-so by the agenda of governments which would be wider than the purely commercial/financial agenda of the market-place. Care needs to be taken that these different agendas are aligned so as not to create inefficient investment in infrastructure or other industry assets and equipment. As an example, ARTC and the Australian Government have committed to a substantial investment in capacity and performance of the north-south interstate rail network in order to meet market requirements and create a modal shift, yielding economic and community benefits. For modal share outcomes to be achieved, however, it will also be necessary for rail operators to invest substantially in the capacity and performance of above rail assets including locomotives, wagons and terminals. This private investment will be driven by solely commercial drivers, and will be further impacted by land-use planning and decision-making.

Inadequate Rail Infrastructure

Through strategic investment and management of the east west interstate rail network, combined with the introduction of above rail competition, rail has significantly improved

service levels and reduced pricing in this segment. Rail's share of the east west land transport market has increased from 65% in 1995 to more than 81% currently.

ARTC recognises that the inadequacy of rail infrastructure and disjointed approach to management on the east coast rail corridors is a significant impediment to rail improving market share on these markets. This is a key motivation for ARTC obtaining management of the interstate rail corridors in NSW and investing over $500m in improving rail's performance and modal share on north-south corridors.

Further investment by the Australian Government of around $1bn in the national network, including rail connections to intermodal terminals and ports in metropolitan areas underline a commitment to remedy this impediment to improved transport efficiency.

It should be noted that, despite this significant investment, it couldn't be expected that rail performance on north-south corridors will improve dramatically overnight. ARTC expects these investments will be implemented over the next 5 years. Rail users will also need to invest in above rail assets such as rollingstock and terminals and will need to arrange their operations and interfaces with other elements of the supply chain around the improved network operating performance.

Taxation Impediments to Rail Investment

ARTC agrees that certain anti-avoidance provisions in tax legislation (Section 51AD and Division 16D) act as an impediment to private investment in the transport network, and would support any changes that might bring about a more favourable infrastructure investment environment.

Too Many Regulators

ARTC agrees that multiple regulators in each state in the areas of safety and OH&S add significant cost and complexity (through inconsistent treatment) to all parts of the national transport logistics network.

ARTC supports the NTC in its efforts to create a national approach to rail safety and address overlaps between rail safety, OH&S and other forms of regulation in Australia.

Rail Track Access Issues

ARTC agrees that differences in access regulation in most jurisdictions in Australia, and well as different approaches to management of the rail network in each jurisdiction, is a significant impediment to efficient rail transport operations, constrains market entry and new investment and creates complexities at interfaces.

ARTC has actively sought to create greater consistency between access regimes and arbitration covering the interstate network in order to create greater efficiency and certainty for network users. ARTC supports the use of the ACCC as a single national rail access regulator.

ARTC is seeking to achieve greater consistency in the management of, and access to, the interstate network in NSW and other parts of the interstate network. ARTC intends to submit an access undertaking to the ACCC covering the interstate network in NSW which is largely consistent with that approved by the ACCC for other parts of ARTC's network.

ARTC is seeking to address the issue of passenger priority in Sydney through the creation of the Southern Sydney Freight Route connecting Macarthur and Chullora.

In its approach to pricing, ARTC currently uses two part pricing as a means to strike a balance between providing incentive for more efficient above rail utilisation (longer, heavier trains), encouraging new entry to the network, and reflecting commercial risks taken by ARTC in providing access. This approach has been endorsed by the ACCC. ARTC is continually monitoring the effectiveness of its pricing approach with a view to encouraging efficient, value based utilisation of the network. ARTC seeks to encourage consistency between pricing policies and structures between jurisdictions.

ARTC supports commercial resolution of issues with regard to liability for damage to track and related insurance matters. ARTC's causal based approach to liability for damage to the track and above rail assets has been endorsed by the ACCC. ARTC has promoted 'pooling' of insurance in the industry, but this has not been supported by all users. ARTC supports the role of the ATSB as a national independent investigator with respect to accidents, but still has some concerns regarding issues of natural justice and multiple jurisdictions in the accompanying legislation.

ARTC believes that access arrangements and pricing should continue to be resolved through commercial negotiation underpinned by economic regulation. ARTC has no issue with the NTC being involved in reviewing the consistency and equity of pricing and access across modes in the context of providing policy advice. Within any particular mode, however, ARTC believes such matters should be left to the existing competition regulation framework at the risk of adding another layer of review for access regimes. ARTC understands that NTC involvement in this area has not been included in its brief.

Education, Training & Skills Development

ARTC understands that the transport industry as a whole is facing a serious problem with respect to skills retention generally and qualified train and truck drivers specifically. The market will inevitably demand that the industry develops strategies to address these issues. ARTC welcomes initiatives being put in place by the ALC and freight councils in this area.

On the other hand, new skills and ideas are gradually being recruited into the rail industry during a period of re-organisation and rationalisation. ARTC encourages this influx as the industry needs to challenge historic paradigms that act as impediments to future efficiency improvements and increased competitiveness.