

## Submission to the Productivity Commission

### **Review of road and rail freight infrastructure pricing**

May 2006

#### **Executive summary**

The review by the Productivity Commission (PC) of road and rail infrastructure pricing will contribute to an understanding of the extent to which the two modes are priced on a competitively neutral basis. As regulator of an access regime in respect of access by non-bulk freight operators to tracks owned or managed by the Australian Rail Track Corporation (ARTC), this submission by the Australian Competition and Consumer Commission (ACCC) focuses on competitive neutrality between access charges paid by general rail freight and heavy road vehicle operators.

The institutional arrangements and the methodological approaches in which road and rail access prices are determined are very different.

In rail, access prices are determined under access regimes established under the access provisions in Part IIIA of the Trade Practices Act 1974 (the Act) and under various statebased access regimes pursuant to the requirements of the Competition Principles Agreement (CPA). Under these regimes infrastructure owners generally attempt to set prices with reference to costs that have been subject to efficiency benchmarks. Rail access prices are generally cost reflective and applied on the basis of mass and distance. They are structured as two-part tariffs in recognition of the significant economies of scale in rail infrastructure. Revenues accrue to rail infrastructure providers which generally have a commercial focus, target cost recovery and are responsible for implementing maintenance and investment programmes. Notwithstanding this commercial focus, significant investments in rail infrastructure tend to be funded at least in part by government grants.

In road, there appears to be less direct links between infrastructure costs, access prices, revenues and infrastructure investment programmes. Under the framework in which the NTC makes determinations for heavy vehicle access charges, costs are not measured directly and access prices are set to recover allocated expenditures rather than reflect costs associated with individual services.

In determining road charges, costs are estimated on the basis of expenditures undertaken by the road agencies in various levels of government and allocated to the heavy vehicle category and to different types of heavy vehicles within that category. The procedures used to attribute and allocate costs are, in the end, arbitrary. There are also uncertainties about the structure of access prices. While access prices are set on the basis of two-part tariffs, the use of the variable charge based on fuel consumption as the main source of access revenue seems to reflect established revenue sharing arrangements between governments rather than the impact of variable costs. While fuel may be to some degree a proxy for distance-related infrastructure costs, there may be more pertinent alternatives. Also, if road infrastructure usage costs are affected by the type and quality of road infrastructure, then ideally this also would have to be reflected in access charges. The result is that in road the link between access prices and revenues on the one hand, and usage costs and maintenance and capital expenditures on the other, appears less transparent than is presently the case in rail.

To the extent that services provided by road infrastructure act as a competitive constraint on the rail transport mode, and road access prices are not set efficiently, then this could restrain the ability of the rail mode from effectively competing for contestable traffic. This may have intra-sectoral implications in that it may mean that the national freight task may not be allocated efficiently between the two transport modes.

Access prices in road and rail infrastructure will be competitively neutral when they reflect their respective marginal social costs and have no impact on the relative competitiveness of road and rail freight operators other than due to cost differentials. This requires above all an accurate understanding of the main drivers of road and rail infrastructure costs, both variable and fixed. This will then determine the nature of the appropriate level and structure of infrastructure access prices paid by the respective users.

To this end, the ACCC considers that the PC review should clearly identify and assess the following.

- The differences that exist between current approaches to the pricing of access to road and rail infrastructure.
- The differences in approach to making investment decisions in rail and road infrastructure. How do such differences affect competitive neutrality between road and rail modes?
- The implications of the differences between road and rail infrastructure providers in terms of corporate structure and commercial orientation. What do such differences imply for the setting of access prices, the significance of cost recovery, and the transparency of government funding?
- The differences between road and rail infrastructure providers in terms of their relationship with users. How do such differences affect investment and pricing decisions?

### **1. Introduction**

The review by the Productivity Commission (PC) into transport infrastructure pricing is timely. The transport sector has occupied a prominent place in the national reform agenda in recent years as it has become increasingly apparent that an efficient transport system can produce sustainable efficiency gains elsewhere in the economy. This is recognised in the recommendations by the Council of Australian Governments (COAG) in February 2006 on transport infrastructure, including the recommendation that the PC review road and rail infrastructure pricing.

The review is taking place at a time when there is public debate about whether the national freight transport task is allocated efficiently among the different transport modes. The PC's Issues Paper notes that some road access charges, particularly for 'large' heavy commercial vehicles travelling long distances, may be set below attributable costs and that this affects the competitiveness of users of rail infrastructure. The next logical step in the transport reform program would be the implementation of pricing arrangements and processes that oblige (and give incentives for) transport infrastructure owners across all modes to set charges that practically and efficiently reflect all economic and social costs . This review will assist with the next phase of reform by identifying the extent to which current road and rail access prices are competitively neutral and help to establish the rationale for further reforms in the way that access prices may be determined.

In this submission the ACCC provides a discussion of some of the economic issues associated with road and rail pricing. These views are based primarily on its experience as regulator of the third-party access regime established under Part IIIA of the *Trade Practices Act 1974* (the Act) for access to rail tracks under the control of the Australian Rail Track Corporation (ARTC). The ARTC network is mainly used for the provision of non-bulk freight services between Australian capital cities, and, as such, road infrastructure is a potential substitute transport mode for much of the traffic carried on ARTC tracks. In submissions to the process of assessing ARTC's proposed undertaking, rail freight operators raised with the ACCC the issue of competitive neutrality between rail and road access charges. The ACCC's assessment of the ARTC access arrangements included consideration of the effects of access charges paid by road transport operators. Accordingly, this submission focuses on issues that by and large relate to the question of competitive neutrality between access charges for use of rail and road infrastructure by rail operators and heavy commercial vehicles, respectively, providing non-bulk freight services between Australian capital cities.

### 2. Existing transport infrastructure pricing

Road and rail access prices for non-bulk freight are presently established under different institutional arrangements using different methodologies.

Road access charges for heavy commercial vehicles (4.5 tonnes and above) are the subject of determinations by the National Transport Commission (NTC) which makes recommendations on charges to state and federal transport ministers. In determining the

charges, the NTC is required to follow a number of principles including cost recovery, efficiency, equity and simplicity. Under the framework used by the NTC road infrastructure expenditures undertaken by commonwealth and state road agencies are allocated to the various vehicle classes, including the heavy vehicle class, on the basis of certain allocators.<sup>1</sup>. These expenditures are estimated on a PAYGO<sup>2</sup> basis representing an average of recently incurred construction and maintenance expenditures. The expenditure estimates establish revenue requirements. Charges for heavy vehicles are then determined to recover expenditures allocated to heavy vehicles in aggregate and to each class of heavy vehicle.

The access charges are in the form of two-part tariffs comprising a variable charge based on fuel consumption and a fixed annual registration charge. The consumption charge is not explicitly identified as an access charge to users but sourced from the diesel fuel excise collected by the Commonwealth as general taxation revenue.<sup>3</sup>

Charges for individual vehicles are not matched with total costs associated with those vehicles.<sup>4</sup> As noted in the PC's Issues Paper, there is concern that existing charges for the use of road infrastructure by 'large' heavy commercial vehicle hauliers (typically, B-doubles and road trains) with whom rail infrastructure users may compete, do not adequately reflect or recover the full social costs involved. For some types of vehicles there appears to be over-recovery of costs, while in the case of 'large' heavy vehicles, there appears to be under-recovery of costs. In a report into the rail industry, the PC noted that '… the road user charging system for heavy vehicles under-recovers road costs attributable to classes of vehicles which compete directly with railways'.<sup>5</sup> Similarly, the Bureau of Transport and Regional Economics (BTRE) reported in 2004 that the current arrangements '… do not achieve full cost recovery for the heaviest vehicles (including B-doubles)'.<sup>6</sup>

Also, there appears to be uncertainty about the structure of road charges<sup>7</sup>; around 70 per cent of total revenues are derived from the variable charge based on fuel consumption but it is not known whether fuel use is the most relevant indicator of the cost imposed by individual road

<sup>4</sup> ibid, p. 1.

<sup>&</sup>lt;sup>1</sup> In its three determinations for heavy vehicle charges, the NTC have used two 'allocators' equivalent standard axle kilometres (ESA-kms) and average gross mass kilometres (AGM-kms). The Bureau of Transport and Regional Economics (BTRE) has noted that there is uncertainty about the choice of an appropriate allocator. See BTRE, *Land Transport Infrastructure Pricing, Working Paper 57*, Canberra 2004, p. 5.

<sup>&</sup>lt;sup>2</sup> Pay-as-you-go is an approach to accounting for capital and maintenance expenditures whereby expenditure is recovered in the year it is incurred. National Transport Commission, *Third Heavy Vehicle Road Pricing Determination, Technical Report*, October 2005, p. 8.

<sup>&</sup>lt;sup>3</sup> National Transport Commission, *Third Heavy Vehicle Road Pricing Determination, Technical Report*, October 2005, p. 65.

<sup>&</sup>lt;sup>5</sup> Productivity Commission, Progress in Rail reform, Inquiry report No 6, Canberra, 1999, p. 249.

<sup>&</sup>lt;sup>6</sup> Bureau of Transport and Regional Economics, *Land Transport Infrastructure Pricing, Working Paper 57*, Canberra 2004, p. 20.

<sup>&</sup>lt;sup>7</sup> ibid, p xi.

users. As noted by the BTRE, other possible indicators of road use costs could include vehicle class, type of road and size of load.<sup>8</sup>

Another feature of the current arrangements is the institutional separation of decision-making on investment and access prices. Decisions regarding expenditures on road infrastructure are made by government road agencies at various levels of government and independently of pricing decisions made by the NTC and of revenues generated by the charges. As the NTC observes:

While the process is based on recovering past levels of expenditure in total, it is not linked to road funding arrangements for each level of government...There is no link between the amount of expenditure and the revenue each level of government receives from the heavy vehicle charging arrangements.<sup>9</sup>

Thus, there appear to be two important areas where costs, prices and investment decisions may be disconnected. First, access charges reflect expenditures, capital and current, incurred by various road agencies that are allocated to each class of vehicles and not otherwise subject to efficient cost benchmarks. Second, the current institutional separation of determinations of access prices and expenditures on road infrastructure suggests a disconnect between revenue and expenditure/investment decisions.

With regard to rail infrastructure, charges for access are typically set by infrastructure owners/managers subject to the requirements of access regimes. These have been established either under the national access arrangements in Part IIIA of the Act , in the case of the ARTC network, or under state-based legislation modelled on the principles set out in the Competition Principles Agreement (CPA), in the case of intra-state rail networks.

Rail access prices for non-bulk freight are often established by negotiation and thus may be market-based rather than cost-based. However, prices are generally set with reference to the costs of providing and maintaining rail infrastructure, including a reasonable return on investment. Regulation of access regimes provides a test that such costs are assessed for efficiency. For some contestable traffic, rail access prices may also be subject to a competitive constraint from road infrastructure. Rail access prices are generally subject to floor and ceiling revenue boundaries to ensure that they are consistent with principles for economically efficient prices. Typically, the floor is defined as incremental cost while the ceiling is defined on the basis of stand alone costs.

As with heavy vehicle access charges, prices for access to rail infrastructure are generally in the form of two-part tariffs. The variable charge is typically applied on the basis of gross tonne kilometres and generally reflects the cost of individual usage. The fixed component is a flag-fall charge and seeks to recover from users a contribution towards fixed and common costs. While traffic volumes in many rail networks used for non-bulk freight are not sufficiently large to allow recovery of total economic costs, in the long run (in this case defined as stand alone costs) rail infrastructure owners are corporatised entities which operate

<sup>&</sup>lt;sup>8</sup> ibid, p. 9.

<sup>&</sup>lt;sup>9</sup> National Transport Commission, '*Third Heavy Vehicle Road Pricing Determination*', *Technical Report*, October 2005, pp. 1–2.

with a commercial focus and generally seek cost recovery as a goal. It is not clear how widely Ramsey prices are used in rail to improve cost recovery.

Neither rail nor road infrastructure presently appear to fully reflect externalities in setting access charges.<sup>10</sup> The main types of freight transport externalities include congestion, accidents and emissions. Some evidence suggests that the cost of externalities associated with road transport exceed those of rail transport.<sup>11</sup>

In summary, there seems to be some uncertainty about the methodology employed to set access charges for 'large' heavy vehicles, in particular the costs that the charges are required to cover and the structure of those prices. The PC review needs to assess the merits of the current NTC approach of setting access charges to recover expenditures undertaken by road agencies. The ACCC considers that there is a need for the PC review to establish the precise nature of costs associated with road infrastructure services and to determine the optimal level and structure of prices that provide the correct signals to large heavy vehicles for efficient use, and to road agencies for the efficient provision of, road infrastructure. Only once there is confidence that rail and road infrastructure prices are determined on a similar basis (or that the differences are understood and measured), will it be possible to assess the extent to which competition in the downstream freight services markets is distortion-free, as well as the true extent of cost recovery in both modes.

This review also presents an opportunity to assess the nature of the existing institutional arrangements in road infrastructure and in particular the effects of any disconnect between road access pricing decisions, revenues and expenditure decisions.

# **3.** Principles of competitive neutrality between transport modes

Competitive neutrality between services arises as an issue when the services are effective substitutes. When two transport modes provide services that are genuine alternatives, a change in the price<sup>12</sup> of one service will affect the demand for the other, and the two services can be said to be linked through their relative prices.

Overall economic efficiency (allocative, technical and dynamic) is fostered when the use of resources in the provision of substitutable services is based on prices that reflect their

<sup>&</sup>lt;sup>10</sup> Externalities arise when an action or transaction imposes costs (or benefits) on parties (especially, but not limited to, parties other than those affected by the action/transaction) that are not fully reflected in market transactions.

<sup>&</sup>lt;sup>11</sup> See Bureau of Transport Economics, *Competitive Neutrality Between Road and Rail, Working Paper 40*, 1999, p. 23; and Bureau of Transport and Regional Economics, *Land Transport Infrastructure Pricing, Working paper 57*, 2004, pp. 18–19.

<sup>&</sup>lt;sup>12</sup> In transport, quality of service, especially such dimensions as reliability and door-to-door transit time, is also important in modal choice decisions by shippers and freight forwarders (and sometimes more important than the freight rates). This is particularly so for road and rail competitive traffics such as general container freight.

respective (short and long-run) marginal social costs of production, and also appropriate cost recovery from user charges.<sup>13</sup>

A number of factors shape the level and structure of competitively neutral prices for transport infrastructure, including the cost structure for each infrastructure and any associated externalities. For externalities, there is the additional issue of their assignment to, and between, infrastructure and its users. With regard to cost structure, important determinants of the costs of providing both rail and road infrastructure are the length (and quality) of track used, the types of mobile plant (vehicles) deployed, and the weight (and nature) of freight carried.

There has been progress made in identifying and measuring costs in transport infrastructure and in moving to access prices that take account of both mass/weight and distance.

An important issue in rail infrastructure is the 'wheel-track interface', that is, the nature of the engineering and economic relationship between train movements and rail tracks. A sound understanding of this relationship is required in order to identify the key drivers of cost and thus measure costs accurately. While some progress has been made in this regard, more research is required. <sup>14</sup> The results of research to date underpins the adoption of charges based on weight, distance, speed and, in some cases, network location.

As for road, it is similarly important that the nature of the 'wheel-road interface' is well understood. A move to cost-reflective pricing in road, as opposed to the present expenditure recovery approach, will entail development of an understanding of key cost drivers. In particular, the PC review should consider identifying factors that affect usage costs and also consider whether these can be incorporated in an efficient road access charge.

However, the fact that progress has not been uniform across transport modes raises efficiency issues within the transport sector.

For example, to the extent that one service (A) is underpriced and fails to cover its relevant costs, while another service (B) is priced at the efficient level, a welfare-loss occurs because:

- service A is underpriced (possibly subsidised) and the consumption and level of activity and resources consumed by service A are higher than the socially-efficient level
- consumption of service B is lower than the socially-efficient level.

In other words, underpricing of A encourages inefficient consumption of A relative to B. The interdependency between two competitive services (A and B) means that consumption of the substitute service (B) is less than socially optimal. In the absence of competitively neutral

<sup>&</sup>lt;sup>13</sup> In addition, economic efficiency involves the maximisation of total surpluses (to consumers and producers), and the condition that these are positive, i.e. the total social benefits exceed the total social costs. This should guide pricing as well as investment. This poses complications (regarding covering total costs) when marginal costs are below average total costs, which is generally the case for (uncongested) rail infrastructure, and, arguably, may also be the case for road infrastructure.

<sup>&</sup>lt;sup>14</sup> See Booz Allen Hamilton, 'Railway infrastructure cost causation', November 1999, report for the UK Office of Rail Regulator; Queensland Competition Authority, *Draft Decision on Queensland Rail's 1999 Draft Undertaking, Working Paper 2, Usage related infrastructure maintenance costs in railways*; Bureau of Transport and Regional Economics, *Rail infrastructure pricing: principles and practice; 2003, report 109*; Booz Allen Hamilton, *Revision of Variable Usage and Electrification Asset Usage Charges: Initial Report,* January 2005, p. 35, report for UK Office of Rail Regulator.

prices, consumption of neither service is taking place at levels that reflect their respective marginal social cost, and allocative efficiency is impaired. That is, absent competitive neutrality, there can be follow-on efficiency losses in downstream freight services markets.

The ACCC noted in its submission to the PC inquiry into the National Competition Policy Arrangements that 'increasing the consistency between the pricing regimes for all modes of transport would foster competitive neutrality and improve the efficiency of use of, and investment in, Australia's logistics network'.<sup>15</sup>

Ideally, a first-best approach ensures that the prices of both services are fully reflective of their respective marginal social costs and that competition in downstream freight markets is not distorted by artificially low prices.<sup>16</sup> In rail, evidence that marginal social costs for the use of rail infrastructure in long distance freight movements are generally below average (social) costs<sup>17</sup>, poses a cost recovery problem with first-best pricing. To maximise the extent of cost recovery user charges must be based on mark-ups above marginal (social) costs. Economic theory suggests that in order to minimize the distortions imposed, the mark-ups should follow the Ramsey principle as far as available evidence allows. This is commonly described as 'second-best' pricing because it maximises the prospect of cost recovery with minimal loss of allocative efficiency. The significance of economies of scale in road appears to be less well established.<sup>18</sup> To the extent that economies of scale in road are less significant than rail, then marginal costs will be closer to average costs and it may be possible to achieve high levels of cost recovery with first-best pricing.

But, if either first-best or second-best pricing are out of reach for one mode (say mode A), then there may be a case for adjusting the price of the substitute mode (B) to achieve the correct relative prices for the two modes. That is, where one mode (A) is underpriced an option is to also 'underprice' the substitute service (B) to minimize misallocation of use between the two modes.

Such an approach corrects the mis-allocation of resources within the transport sector. However, possible consequences are that both modes may fail to achieve adequate cost recovery, that transport as a whole is subsidised and that as a result, misallocation of resources is escalated to the intersectoral level.<sup>19</sup>

To reiterate, the best course is to ensure that the relevant costs are accurately identified and measured and where necessary to apply efficient mark-ups above marginal social costs. In order to form a view on the optimal level and structure of road access prices, the PC review

<sup>&</sup>lt;sup>15</sup> ACCC, Submission to the Productivity Commission, Review of National Competition Policy Arrangement, July 2004, pp. 14–15.

<sup>&</sup>lt;sup>16</sup> Darryl Biggar, 'Structural reform in the Rail Industry: should train operators be separated from the provision of the track infrastructure?', Draft background paper for OECD, December 2004, p. 4.

<sup>&</sup>lt;sup>17</sup> Setting aside capacity constraints (train paths and, loosely, road width) and resultant forms of congestion.

<sup>&</sup>lt;sup>18</sup> See H Ergas, 'Road Pricing and Modal Choice', paper prepared for Freight Infrastructure Seminar, Canberra, April 2006, p. 3.

<sup>&</sup>lt;sup>19</sup> Conceivably, while revenues would be insufficient to cover costs, the welfare cost of operating both services at a loss might be smaller than the welfare loss associated with consumption of the two services diverging from socially optimal levels.

should establish the nature of the relationships between costs and usage and provision of infrastructure services.

Importantly, the PC review should also assess whether the access pricing issue in road can be dealt with independently of the current institutional arrangements. The PC should also assess whether just establishing an approach for efficient cost-reflective road access prices without also implementing changes to the current institutional setting will achieve the desired objectives. Efficient road access prices will send the correct signals for improved consumption decisions. However, competitive neutrality also requires maintenance and investment decisions made in response to efficient pricing signals; the PC review could consider changes to present institutional arrangements that would promote efficient road expenditure decisions.

# 4. Effects of competitively neutral transport infrastructure prices

It is difficult to ascertain the likely effects of competitively neutral prices for transport infrastructure in Australia as it is not possible on the basis of the available evidence, to be conclusive about the relative efficiency of rail and road access prices. The paucity of information highlights the imperative for the PC review to determine the nature of costs and demand characterising rail and road infrastructure.

As noted, a primary requirement for competitive neutrality in pricing is measuring the costs of providing and operating transport infrastructure.

As part of the process of determining the extent to which road and rail access prices are competitively neutral, it is also necessary to assess whether charges reflect efficient cost determinants and represent efficient approaches to cost recovery. To the extent that existing road access charges are not set efficiently and reflect under recovery of costs incurred to use and provide road infrastructure, and these charges act as a restraint on rail access charges, then this can prevent rail infrastructure owners from maximising the extent of cost recovery through efficient access prices. A possible implication is that the allocation of freight between road and rail transport is distorted; specifically the heavy haulage part of road use may be excessive while rail infrastructure may be underutilised. Importantly, this also means that signals for investment decisions in both road and rail infrastructure are likely to be distorted and may not take sufficiently into account cost and demand conditions.<sup>20</sup>

Where costs of providing access to transport infrastructure by non-bulk freight operators have not been measured and reflected in access prices, application of charges that more accurately reflect costs (such as cost-based mass-distance pricing) may lead to relatively higher access charges for the mode that is currently under-priced.

It is difficult to predict the quantitative modal shifts in response to any changes in intermodal price relativities. It would depend, among other things, on the nature of the contestable traffic and the relative operational efficiencies of the two transport modes.<sup>21</sup> Where road

<sup>&</sup>lt;sup>20</sup> See for example, Exports and Infrastructure Taskforce, 'Australia's Export infrastructure', May 2005, p. 33.

<sup>&</sup>lt;sup>21</sup> Road transport is generally more efficient at providing door-to-door services because rail transport requires a greater amount of handling at both ends of a freight movement. This confers a comparative advantage on road for short-distance freight tasks.

access charges currently act as a restraint on rail access prices, a move to higher road access charges could affect the relative competitiveness of road freight operators and thus also affect rail infrastructure provision. The extent to which the providers of rail infrastructure might be affected by higher road access charges could depend on a number of factors. For example:

- relative demand price elasticities: The price elasticity of the demand for road freight will depend on the degree of substitutability of the various types of freight traffic presently carried on road. The greater the proportion of current road freight that is substitutable, the greater the quantity of total freight with price elastic demand and the greater the potential volume shift to rail transport as a result of road infrastructure price increases.
- short-run elasticities of supply substitution between transport modes: Any intermodal shift from road to rail is likely to most immediately affect road and rail line-haul providers. In the short run, rail infrastructure capacity is fixed and demand for additional space on a network could be subject to capacity constraints. Where network capacity utilisation is relatively high the rail network's capacity to accommodate demands for additional train services (on tracks and in terminals) may be limited in the short term.
- relative cost burdens represented by rail and road access charges. The smaller the proportion of road infrastructure access costs to the total costs of providing road transport services, the less sensitive the road freight task is likely to be to price changes and the smaller will be the effect of higher road infrastructure charges on the intermodal mix.

While it is difficult to predict with certainty the effects of competitively neutral transport infrastructure prices on the modal mix, it can be confidently asserted that efficient costreflective access prices in road infrastructure will improve intra-modal outcomes in the road sector. Among other things, competitively neutral charges for the use of road infrastructure could result in a re-allocation of the mix of freight tasks within road transport among the different classes of road vehicles. This could have consequences for investment in the various vehicle categories. In some cases, it could also have consequences for the design requirements of and expenditure in road infrastructure.

Against this background of the benefits of efficient pricing in transport infrastructure there is the challenge of its practical application. Some of the issues experienced by the ACCC in the case of rail are noted below.

# 5. ACCC assessment of economic costs of rail infrastructure—ARTC experience

In May 2002, under the provisions in Part IIIA of the Act, the ACCC accepted an access undertaking from ARTC that set out the terms and conditions of access to its rail network.

ARTC's access charges consist of a two-part access tariff with a variable mass-distance charge applied on usage and a fixed component applied as a flag-fall charge for the right to access the network and is applied irrespective of the level of usage. In assessing the reasonableness of ARTC's access prices, the following factors were taken into consideration:

- The costs of providing and maintaining the ARTC rail infrastructure were subject to appropriate efficiency checks.
- ARTC's access prices were subject to a 'floor-ceiling test' (based on incremental and an estimate of stand alone costs, respectively) for revenues for various segments of the ARTC network. Incremental costs for a segment were defined as costs that would be avoided if that particular segment were not operated and included track maintenance and management costs, and annualised periodic maintenance expenditure for steady-state maintenance of infrastructure. Stand alone costs were estimated on a network segment basis and included the costs of additional capacity, depreciation, return on capital and allocation of overheads.
- In all network segments, revenues were less than the ceiling band. In most cases, revenues were closer to the floor than the ceiling and were forecast to remain below the ceiling for five years. Total revenues were forecast to be lower than the ceiling, that is, the stand alone costs of providing and maintaining infrastructure assets.
- Depreciated optimised replacement cost (DORC) methodology was used for valuing ARTC's infrastructure assets.

Also, rail freight operators argued to the ACCC that the absence of competitive neutrality between road and rail access charges was inhibiting their competitiveness.<sup>22</sup> For the purposes of assessing the ARTC access undertaking under the provisions of Part IIIA, road access charges were considered part of the set of competitive constraints faced by rail freight operators.

#### 6. Final observations

There appear to be substantial and entrenched differences between road and rail infrastructure provision that could potentially affect the relative competitiveness of the respective users. While recognising the magnitude of the challenge involved, such differences pose fundamental questions regarding the empirical identification of where the differences are most important and the priorities for their practical attention.

This submission has described some of the more salient differences between road and rail infrastructure access provision as:

- the corporate and commercial orientations of the access providers
- the directness of their relationships with users
- the approach to cost recovery and the determination and financing of investments (including the degree of the connection to pricing)

<sup>&</sup>lt;sup>22</sup> See ACCC, 'Decision—ARTC Access Undertaking', May 2002, p. 90.

• the bases and principles governing user charges.

The challenge for the PC review should be to identify and understand the significance of these differences between before forming views on whether or how road and rail access prices can be determined on a competitively neutral basis.

The PC review provides an opportunity to better inform debates that arise when the effects of competition between road and rail modes are being assessed. The ACCC's experience in assessing the ARTC undertaking in 2001–2002 and in assessing the likely effect of mergers and acquisitions in industries associated with transport has highlighted the lack of rigorous, independent information to inform such debates.