SUBMISSION TO

PRODUCTIVITY COMMISSION

PROGRESS IN RAIL REFORM INQUIRY

Queensland Rail - October 1998

Reform Inquiry is primarily by reference to previous submissions to the Neville Inquiry and to the Black Coal Inquiry. Submissions to the Neville Inquiry included an original submission and a brief supplementary paper at the request of the Inquiry, dealing with the issue of vertically separated and integrated structure within the rail industry. Both these papers are included for the Commission's reference.

This brief submission will summarise some of the main themes of the Neville Inquiry submissions, and add some further comments in response to the main areas identified within the Productivity Commission's 'Issues Paper' of August 1998.

The Neville Inquiry submission gave particular attention to the following issues:

- competitive neutrality between rail and road transport modes;
- some of the regulatory factors influencing modal share and modal shift and the net social and economic costs of loss of market share by rail;
- the issue of economic externalities in transport; and
- related to this, the importance of attending to issues of allocative efficiency as well as productive efficiency in transport.

In regard to these issues, two quantitative studies by Dr Ron Allan (sponsored by Queensland Rail) were referred to and are being forwarded to the Productivity Commission inquiry. The study on the effects of B-Triples and B-Doubles on the Queensland Road Network makes an important contribution to the methodology of assessing the net economic costs and benefits of a modal shift from rail to road. The study on road access charges in Queensland under the national competition policy begins to quantify net cost under recovery of large road vehicles, taking into account the costs of road maintenance as well as economic externalities of safety and greenhouse gas emission.

The central thrust of Queensland Rail's arguments can be summarised as follows: The transport industry involves very substantial economic externalities. The magnitude of externalities (particularly in regard to safety and congestion) lead to potential gains through allocative efficiencies comparable to or in excess of the gains to be expected

through productivity based efficiencies. Therefore if economies of transport are to be optimised then there needs to be robust analysis of optimal modal split in broad economic terms, examining the main discrete market segments such as interstate freight and major urban passenger centres. This needs to be carried out or sponsored by an independent Commonwealth body. This could provide a framework for defining the infrastructure standards and access pricing required to attract the optimal amount and type of traffic task to rail.

Related to this line of enquiry, several allied developments would provide a foundation for more effective multi-modal transport policy and strategy, including:

- Further basic research into the economics of transport should include equilibrium modeling of transport policy implications and multi-modal infrastructure scenarios.

- A framework needs to be developed for appropriate inter-modal transport infrastructure project evaluation, which outlines a cost-benefit methodology consistent with accounting for externalities and environmental costs and which takes into account the interaction of urban and interstate capacity constraints and utilisation. An outcome of this framework will be that decisions on rail and road corridor investments will be made on the basis of a common set of criteria and cost-benefit analysis.

A view on the role of government follows from the arguments presented. The role of government will include:

- intervention in market processes for clearly defined purposes in regard to management of externalities;

- ensuring an integrated inter-modal approach to transport planning and policy development;

- facilitating effective and equitable competition between transport modes; and

- facilitating fundamental economic research as a foundation for the above three roles.

There are undoubted opportunities for greater involvement of the private sector in the provision of rail transport services. However it can be expected that there will be a continuing role for transparent and explicit government funding of rail infrastructure and rail services. Such funding might be based on a range of legitimate rationales including the management of externalities, optimisation of modal share, the pursuit of regional development objectives or the pursuit of broader social objectives.

Community Service Obligations

In regard to government funding of railways, a review of recent and ongoing developments in Queensland have pertinence to the issues raised in the Productivity Commission's 'Issues Paper' with respect to Community Service Obligations.

Queensland's Corporatisation Review Taskforce report and Queensland Rail's response to that report has occurred in the context of ongoing negotiation of CSO contracts between Queensland Rail and Queensland Transport. The developing framework distinguishes between two types of funding arrangement. Government Service Agreements involve the procurement by Government of transport services from Queensland Rail, based on the expectation of an 'efficient cost' or market parity price for that service. These contracts are in principle no different to any other form of contractual procurement by government of goods and services. It involves provision of a good or service where less than full cost recovery from the end user is believed to be justifiable in terms of broad cost-benefit analysis. Pricing of the services are based on efficient cost with a rate of return based on a Capital Asset Pricing Model methodology.

The second form of funding arrangement is referred to as "input CSOs". Sometimes the cost of providing a service will be higher than efficient cost or market parity. Government may choose not to support or to restrain reforms that would reduce the price to Government of that transport service. This perspective may be based on government policies regarding regional employment, welfare, or other considerations for which it is ultimately accountable. This 'input CSO' is part of the relationship between a GOC and government and needs to be transparently distinguished from the relationship between a GOC and government as a purhaser/customer.

The extent to which railways "operate with deficits" (issues paper, p7) is a function of the extent to which governments choose to 'fund inefficiency' through 'input CSOs' (either transparently or otherwise). The notion of 'railway deficits' should not be confused with economically justifiable procurement by government of transport outcomes, either through the funding of infrastructure, or by allowing less than 100% cost recovery through the end user of a train service (such as an urban passenger service).

Competitive Neutrality

Since Queensland Rail drafted its Neville inquiry submission, the regulatory trend has continued to erode rail's competitive position relative to road transport in the contestable freight market. Major potential regulatory impacts include:

- The Australian Transport Council (ATC) has approved increased mass limits in principle, although funding sources for associated bridge strengthening have not been identified and the decision has not been implemented.

- The coalition tax package includes changes to diesel fuel tax which will weaken the rail industry's relative competitive position because of a failure to exempt the rail industry from the retained diesel fuel excise, despite exemption for other 'off road users'. In effect, the tax package provisions mean that the rail industry pays access charges twice – by levying a rail user charge in addition to the rail access charge that applies under access regimes.

- Moreover the overall effect of the tax package by the government's own assessment has a greater impact on rail transport costs than road transport costs. Queensland Rail's preliminary assessment indicates potentially further deleterious effects on the rail industry than those identified within the tax package papers.

This regulatory trend should not occur in a piecemeal fashion in the absence of an evaluation of the net economic outcome of eroding contestable rail freight markets.

Reduction to diesel fuel excise moves away from inherently more equitable variable road user charges (such as fuel tax or mass-distance charging). Reliance on fixed

charges (registration fees) will exacerbate cross subsidisation of heavy long distance road freight by smaller road vehicles and short distance freight services. There are apparently no other changes or reviews planned in regard to infrastructure pricing policy, despite recommendation 12 of the Neville Committee:

> *"The committee recommends that the Commonwealth develops a more consistent, equitable approach to transport infrastructure charges to ensure competitive neutrality between modes".*

Queensland Rail reiterates the need for an independent and robust review of intermodal competitive neutrality with a focus on road infrastructure access pricing.

Industry Structure and competition

Queensland Rail's supplementary paper to the Neville Inquiry ('Integration of Railways') summarises QR's view in regard to structural integration and its relationship to competition. The paper also outlines the reasons for Queensland's adoption of an infrastructure network group as a separate business centre with separate accounts but within the overall structure of an integrated railway.

Corporatisation and commercialisation

The Queensland Government Taskforce Report on the Review of Rail Corporatisation (November 1997) made a wide range of recommendations, many of which have already been implemented or are in the process of being implemented, including:

- that the infrastructure asset remain in the ownership and management of Queensland Rail, but managed by a separate business unit;
- that the government repeal the "coal moratorium" on third party access;
- that the Shareholding Ministers/Government and the Queensland Rail Board agree to a three to five year performance contract;
- that Queensland Transport complete an immediate audit of transport services it currently purchases against agreed and stated transport objectives (eg

externalities); and

- that the purchase of services be encapsulated in a formal contract between Queensland Transport and the provider and be based on "best practice prices".

Access regimes and regulation

Access regimes

QR recognises that the effective management of the national rail asset is critical to provide an incentive for modal share consistent with optimised allocative efficiencies. This will entail both *adequate infrastructure standards* and *appropriate access pricing*. *Uniform rail operating standards* are also critical to the efficient operations and customer focus that will attract non-urban freight. These points were recognised by the recommendations made in the Neville Report.

QR supports the notion of a 'one stop shop' for operators wishing to access the interstate standard gauge rail network between Brisbane and Perth. However, QR believes, particularly in relation to the East Coast route between Melbourne and Brisbane, that an infrastructure charge sufficient to ensure the maintenance and replacement of interstate rail assets will be unacceptably high, given the lack of competitive neutrality with long haul road freight. The need for, and outcome of, arbitration between National Rail Corporation and the Rail Access Corporation illustrates the need for financial support from government to ensure rail access charges are commercially viable for above rail operators.

Interstate third party access regime

The objective of a national approach to interstate access should be to achieve an effective access regime for interstate rail freight with a single point of contact to arrange access to the interstate rail network. In this regard, QR would reiterate comments made in the Neville Report which emphasised that:

- considerable work will be required to overcome the cost and complexities of operating across borders, in terms of operating systems, safety systems and

accreditation, telecommunications etc.

In addition, QR believes that interstate operations should not be focused on at the expense of intrastate operations.

QR supports the establishment of a single national body to ensure consistency and harmonisation on the interstate standard gauge rail network with specific regard to pricing, investment and access.

However, the investment set aside for both the establishment of ARTC and for achieving infrastructure performance standards, falls far short of that required. Moreover, the allocation should allow for not only investment costs, but also establishment costs and operating costs including maintenance. Funding falls critically short of that required for the ongoing maintenance of the corridors in question.

QR is supportive of setting long term goals for interstate access and recognises the need for incremental investments, especially in regard to the fundamentally deficient and primitive standards between Sydney and Brisbane. However, these investments may need to be evaluated in light of a new inland Melbourne-Brisbane corridor.

QR considers that operation control should rest with those who have financial responsibility for the interstate network.

Intrastate third party access regime

The *Queensland Competition Authority Act* (the Act) commenced in July 1997. The Act provides third parties with a right of access to declared services in respect of significant infrastructure such as major rail corridors. The use of QR's rail infrastructure for the purpose of providing intrastate transportation by rail was declared as a service under the Act earlier this year. The Queensland Competition Authority (QCA) was established, in part, to regulate the provision of third party access to declared services.

The Queensland Government has requested a recommendation by the National Competition Council (NCC) that the Queensland Rail Access Regime (consisting of the Act and the regulation declaring QR's rail infrastructure) be certified as an 'effective regime' in accordance with the Competition Principles Agreement, for the purposes of the

Trade Practices Act 1974. QR understands that the Queensland Government is still awaiting the NCC's response to its request. If recognised as an 'effective regime', the Queensland Rail Access Regime will govern third party access to QR's rail infrastructure for intrastate transportation.

In response to the implementation of National Competition Policy, QR established an independent Network Access Group (NAG), separate from the QR business groups providing train services, to deal with third parties and related issues. NAG is in the process of drafting a voluntary Access Undertaking, for the purpose of setting out the processes and other relevant criteria under which QR will negotiate for third parties to access QR's rail infrastructure. The Queensland Rail Access Regime provides for such an undertaking. The draft Access Undertaking has been distributed to a number of interested parties for informal comment prior to its finalisation and submission to the QCA for approval. The QCA will conduct its own formal consultations with stakeholders before deciding whether or not to accept QR's Access Undertaking.

The pricing principles contained in QR's draft Access Undertaking reflect a constrained market pricing approach. It recognises that railway operators competing in different end markets have a different capacity to contribute to the fixed costs of operating railway infrastructure. QR believes that market-based pricing constrained by cost-based floor and ceiling limits will be most likely to lead to an optimum economic outcome. The proposed constraints are intended:

- to prevent QR from extracting monopoly profits; and
- to ensure that access prices are not set so low or so high as to have some rail operators cross subsidising the services provided to others.

In establishing access prices, QR will be able to discriminate between railway operators competing in different markets. Railway operators competing in the same market will be treated consistently in terms of the application of access pricing. Charges will not be higher or lower, after allowing for specific factors relevant to each case, than those for other operators competing in the same market to such an extent that they risk significantly distorting competition between operators or end users.

As QR recognises that its pricing approach results in a large range within which access may be priced, it is proposing to develop reference tariffs for certain types of train services (for example, operating in a specific market and in a specific geographical area). The QCA will examine QR's reference tariffs, and if satisfied, endorse them for a defined period. Consequently, this will provide greater certainty for potential operators.

Inter-governmental issues

During 1998 the Commonwealth has been active in establishing committees and consultative structures for implementing the harmonisation and standardisation agenda emerging from the Maunsell's report. Most of the issues raised in the Productivity Commission's issues paper under this heading are being dealt with through these forums, with the focus on standardisation.

However the issues paper poses the question "If there is to be a national rail network, is strategic oversight required of, for example, planning and investment?" And it is in relation to this role of strategic oversight that existing structures may not be adequate.

This could be addressed through the formation of an appropriately tasked National Land Transport Commission as recommended by the Neville Inquiry (recommendation 13). This builds on the kind of institutional model exemplified by the National Road Transport Commission. Such an organisation would need to be based on a Terms of Reference and role designed to fulfill the strategic functions of advising the Government on national transport planning and investment. This would be with reference to the national rail and road network, allowing the planning and prioritising of infrastructure investments according to appropriately broad economic criteria.

Performance of the Australian Industry

Queensland Rail's Neville Inquiry submission highlighted the extent to which best practice infrastructure standards are fundamental to rail performance. Improvements to Queensland's rail infrastructure (particularly the major investment program on the North

Coast Line) have been a major factor contributing to improvements in productivity achieved since the beginning of QR's reform program in 1990/91. These improvements are summarised in the following tables:

Table 1: Consolidated Performance Indicators - Bulk and general freight

Indicator	Unit	1990/91 Result	1996/97 Result	Percentage improvement
Traffic task	Millions of NTK (Net tonne kilometres)	22 620	28, 754	27%
Locomotives		586	511	13%
Wagons *(revenue-earning)*		16 127	11, 846	27%
Employees *(total QR)*		20 428	15, 168	26%
Employees *(excluding passenger business)*		16 547	11, 361	31%
Traffic task per wagon	Millions of NTK	1.40	2.43	74%
Traffic task per employee	Millions of NTK	1.40	3.06	119%

Table 2: Performance indicators - urban passenger (Citytrain)

Indicator	Unit	1993/94 Result	1996/97 Result	Percentage improvement
Traffic task	Train kilometres (millions)	6.645	9.699	46.0%
Working expenses per train km	$ per km	$22.67	$21.04	7.0%
Train km per Employee	Train kilometres	2, 825	3, 703	31%

Queensland Rail is not currently carrying out formal benchmarking of performance against overseas railways. As indicated in the Neville submission, previous attempts to benchmark Queensland's bulk freight against the USA's Burlington North Sante Fe (BNSF) railroad have highlighted the complexities and difficulties of these comparisons and the numerous factors that need to be controlled for.

The outcome of the BNSF benchmarking exercise, and the associated changes in Queensland Rail's freight rate policy were detailed in QR's submission to the Black Coal Industry Inquiry. This submission included details on freight rate reductions, reduced freight rate escalations and freight incentive schemes.

Adjustment issues

Contemporary rail technology does result in a much reduced need for direct labour. Substantial staff reductions have been a feature of Queensland's rail reform program, as

has been the case thoughout Australia.

However Queensland Rail has focused on developing a strategy of rebuilding the business and preserving core competencies. Within this strategy reductions have been managed through natural attrition and a voluntary early retirement program. Management of redundancy has also featured a program of reskilling staff.

Nevertheless, appropriate staffing levels and flexible staffing arrangements are fundamental to continuing reform. Business processes need to reach standards of efficiency achieved by privatised railways and new entrants.

The Review of Corporatisation undertaken by the Queensland Government addressed this issue in some depth, concluding that:

- Employment in unproductive or redundant tasks does not provide job security or job satisfaction, and can 'infect' the overall culture of the organisation to the detriment of sustainable business.

- Ad hoc or non transparent use of the railway as a tool of employment policy tends to be expensive and ineffective in achieving sustainable employment or regional development outcomes.

The Review proposed the implementation of a Rural and Regional Development Fund to provide a mechanism for funding optimally effective solutions to employment and economic growth problems in rural and regional communities. Benefits flowing from efficiency reforms would be used to fund the program. The package would be two pronged with provision for:

- responding in the short term employment needs associated with rail reform; and

- developing long term sustainable employment growth within regions, through councils constituted by local business and community representatives.

Conclusion

The Neville Committee emphasised that governments must consider transport on a

national and intermodal basis. Queensland Rail's submission shares this emphasis. The submission highlights some of the domains within which fundamental economic research and analysis of transport needs to be carried out if there is to be a rational framework for this more strategic perspective. This research needs to be resourced and given a high priority given the accelerating rate of change and reform within the rail and transport industries.

Central to an integrated and strategic approach is the effective management of demand though appropriate infrastructure pricing, including the redressing of an inadequate and declining variable component to road user charging.

This brief submission should be read in conjunction with the other submissions and research projects referred to. Four of these are included as attachments to the submission:

1. The Queensland Rail submission to the Neville Inquiry.

2. The supplementary paper to the Neville Inquiry regarding integrated structure.

3. Copy of the study by Dr Ron Allan "The Effects of B-Triples and B-Doubles on the Queensland Road Network".

4. Copy of the study by Dr Ron Allan "Road Access Charges in Queensland under the National Competition Policy".

The Queensland Rail submission to the Productivity Commission Black Coal Industry is referred to but not included as an attachment as it is already in the hands of the Productivity Commission.

Queensland Rail would be pleased to further discuss any of the issues raised in this paper or the accompanying attachments.

INTEGRATION OF RAILWAYS

The Issue

There is increasing polarisation worldwide between two very different approaches to running railways:

- the integrated 'one organisation' approach of the commercially successful railways of the USA, Canada and New Zealand; and
- the fragmented institutional separation of infrastructure and operations being pursued by the interstate railways of Australia, the UK and some Scandinavian countries.

Industry history indicates that the separation of operational control from infrastructure control evolves and emerges naturally in some circumstances. US integrated railways provide commercial access to operators traversing their tracks as part of a larger network. Moreover examples of commercially successful railways can be found within both vertically integrated and vertically separated structures.

The issue then is not whether infrastructure and operations should be separated. The crux is understanding to what extent and under what circumstances control and ownership should be separated, and understanding when vertical separation of ownership should be mandated by Government.

Queensland Rail's submission to the Neville enquiry asserted that "there are advantages to an integrated structure, including factors of optimal size, economic value, lower transaction costs and efficiencies, as well as safety. Vertical integration best accommodates the high level of interdependencies that exist between infrastructure and operations."

Subsequent to Neville Enquiry sittings in Brisbane on 19 February 1998, this follow up paper expands on the advantages of integrated railways.

What drives separation?

There appears to be at least three main lines of thought underlying the appeal of vertical separation:

- Firstly, dissatisfaction with historical railway business performance can predispose Government to a structural solution that provides a one off windfall to Treasury coffers and helps to dispose of non performing debts.
- Secondly, there are analogies with other transport modes. Shipping owners and operators generally do not own ports and port facilities. Road transport operators certainly do not own or control roads. Airlines do not own airports or flight paths. Why should rail be any different? The short answer is that when rail infrastructure uses more than a small percentage of its capacity it requires central control to

achieve safety and efficiency. The longer answer is developed within this paper.

- Thirdly, there is the agenda of increasing competition and the influence of National Competition Policy. By separating out the natural monopoly element of rail infrastructure and encouraging operator competition through commercial access arrangements, efficiency can be maximised through competition. Without infrastructure separation it is presumed that the carrier controlling the infrastructure will discriminate against competitors and inhibit competition. The limitations of this perspective are discussed below.

Vertical Separation and Competition

The main driver of infrastructure separation in Australia appears to have been National Competition Policy. However the link between effective competition and vertical separation is less than clear cut.

Vertical separation as a means of competition overlooks the importance of intermodal competition as a market based mechanism for providing efficiency incentives. It also overlooks that there are a range of structural options and tools available for providing infrastructure access and intramodal competition where intermodal competition is weak. One of these tools is mandated access. Powerful competitive incentives can be introduced through the threat of third party access, and this can be intensified through an appropriate regulatory framework and the threat or reality of mandated access.

Moreover countries that have separated their infrastructure have not achieved competition on the rails to date. Sweden's annual infrastructure investment has increased by more than 300% since separation in an attempt to create a level playing field with roads, but there is no intra-rail competition to date. There is virtually no competition on the rails in the UK.

Factors other than vertical structure appear to be far more important in determining the capacity to generate intramodal competition - factors such as traffic density and point to point flows (ie the market potential for multiple operators).

Queensland has developed a model where an integrated GOC railway has an enhanced separation of control, but without the separation of ownership and with consequent retention of most of the advantages of integration. The advent of the Queensland Competition Authority has provided a framework that helps to ensure that actual and potential third party rail operators are treated equitably. It also helps to ensure that productive efficiencies are extracted from the creation of a competitive environment. The performance of Queensland's approach over the next few years will be critical to an evaluation of the advantages and disadvantages of integration.

It is particularly important to recognise that probably the most significant factor contributing to rail inefficiencies is the tendency for the rail industry to be bound up in certain political processes. These have objectives other than pure transport outcomes - ie social welfare, employment and regional development objectives. Recent developments between the NSW Government, Rail Access Corporation and Rail Services Authority, serve to highlight that infrastructure separation is not a solution to

this problem.

Undue emphasis on the 'solution' of vertical separation is based on a mis-diagnosis of the problem. The involvement of private capital may well bring to bear forces to establish arms length relationships with government in regard to efficiency related decisions. Infrastructure separation of itself demonstrably does not achieve this.

Infrastructure and operations inderdependencies

An integrated railway can most effectively make the infrastructure and operational trade-offs necessary to make optimal investment decisions and provide the best possible service. The physics and engineering of steel wheel and steel rails do not correspond to organisational boundaries. Examples of these interactions include:

- Investing in infrastructure improvement needs to be traded off against other strategies such as investment in rollingstock, changing train configurations, and changing operational limits (axle load, speed). Decision making in regard to infrastructure investment and rolling stock operations are therefore closely interconnected.
- Rollingstock maintenance strategies need to be traded off against infrastructure maintenance and replacement strategies. For example an operator who does not maintain the infrastructure will not be as vigilant in servicing 'square wheels'. Infrastructure maintenance costs will be adversely impacted.
- Technical development is heavily integrated between train and track.
- Coordination of track maintenance and operations may not be managed efficiently when these responsibilities are separated.

These kind of issues can indeed be managed through complex contracts with monitoring and performance regimes. But it is a complicated and expensive business to do so.

Costs of infrastructure separation

Overseas experience shows that separation of railway corporations result in considerable legal and administrative costs. For the kind of reasons discussed above, when ownership is separated, the management based coordination that is available within an integrated company must be replaced by complex and expensive contractual agreements.

Moreover, introduction of new institutions - the result of railway separation - has been shown to be inevitably accompanied by duplication of managers and support staff. This leads to significant increases in Government resources to manage the complexity that has been created.

An independent study by Mercer Management Consulting and Booz-Allen & Hamilton stated: "separating QR's infrastructure from operations and setting up a

track authority would not be as complex as the establishment of Railtrack and the cost of UK privatisation (total costs of over $300 million) but we would expect costs of the order of $30 to $50 million".

Further costs (probably not captured in the Mercer/Booz-Allen study) relate to information systems. The strategic direction of many transport organisations, including Queensland Rail, is towards logistics management and involvement in the whole supply and distribution chain. This has entailed heavy investment in global and integrated information systems. Breaking up QR at this point would result in massive losses due to abandoning such systems and/or having to redevelop systems at additional cost. Indeed the move towards logistics management is about industry integration and disaggregation goes against this trend.

Reduction of market responsiveness of infrastructure investment

A vertically integrated railway will make market driven maintenance and investment decisions. A separate infrastructure company may be removed from market pressures and consequently may over-invest or under-invest. It could be argued that this has occurred with Swedish rail infrastructure investment levels.

Economies of scope and size

Railways tend to work better as large entities, as evidenced by the US experience and by recent UK mergers. This reflects an industry characterised by high fixed costs and high transaction costs.

No analysis has been done on optimal size in Queensland. However the Mercer Management/Booz-Allen & Hamilton consultancy, which was carried out as part of the recent Queensland State Government Corporatisation Review Taskforce, made some relevant comments.

The report argued that the relationship between total costs of access with separation compared to total costs of access with an integrated QR, depends on the number of new entrants when barriers to entry are removed. In other words, the report argued that if changes in the regulatory environment fail to result in market support of multiple operators, then the economies of scope and size should be accepted and the costs of infrastructure separation are likely to exceed the benefits.

This contingent and cautious approach to vertical separation seems likely to underpin Queensland policy development for the foreseeable future.

Safety

Safety is essentially about reducing risks by reducing variation via standardisation. Yet creating multiple suppliers with different cultures and procedures has two adverse effects:

- increased risks of safety failures
- increased costs due to the complexity required to conform to one standard.

Moreover, translating government policies into standardised safety systems requires considerable engineering and operational expertise to convert performance standards into technical standards. Such expertise best resides in large organisations that span infrastructure and rollingstock competencies.

Staff and community reaction

Queensland Rail staff reaction to separation was judged likely to be antagonistic, with the potential for widespread instability and industrial unrest. Staff and community reaction could have paralleled that of the branch line closures proposed in the early 1990s.

The social systems and cultural aspects of vertical separation are not well understood and the risks are high. Collective attention could well be diverted from incremental improvement and consumed by a combination of industrial/political conflict and the need to progress complicated realignment of structures and systems.

Conclusion

Queensland's retention of an integrated structure may be out of step with Australian national trends. But it's not out of step with the more pluralist international trends. It remains unclear under what circumstances vertical separation results in increased competition or efficiency. However since the costs of separation are significant, the benefits of separation should be established as significant and unequivocal before a policy of mandated separation of ownership can be justified.

Submission to:

The Parliament of the Commonwealth of Australia, House of Representatives Standing Committee on Communications, Transport and Microeconomic Reform

For:

INQUIRY INTO THE ROLE OF RAIL IN THE NATIONAL TRANSPORT NETWORK

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INTRODUCTION

Queensland Rail

Queensland Rail (QR) operates one of Australia's largest and most modern rail networks with more than 9400 kilometres of narrow gauge track. Four Business Groups - Coal & Minerals, Freight, Citytrain and Traveltrain ~~Travetrain~~ - provide extensive transport services to Queensland's mining, primary industries, tourism and manufacturing sectors, as well as fast, safe and comfortable passenger services in the Brisbane metropolitan area and between key regional centres throughout the state.

Queensland Rail is also one of the nation's major transport businesses with an annual turnover in excess of $1.8 billion. The Coal & Minerals and Freight Groups hauled 105 million tonnes during 1996/97, to become the first Australian land transport operator to carry more than one hundred million tonnes of freight in a year.

As an integrated GOC railway QR has been undertaking a major program of reform since 1991 and has achieved major gains in productivity. Employee productivity has improved by 79% and asset (rollingstock) productivity has improved by 58%. This has been achieved during a period of major investments, including infrastructure investment in the Main Line Upgrade and the extension of the urban network to the Gold Coast. Queensland Rail is halfway through a ten year investment program

of $5.5 billion.

EFFECTIVE AND EFFICIENT USE OF RAIL

The role of rail in Australian Transport

In 1994-95 railways hauled 56% of the non-urban rail and road freight task. 65% of this is coal and iron ore, two of Australia's principal export commodities, with wheat haulage contributing another 5-10%. These commodities comprise almost 20% of Australian exports and are worth $14 billion to Australia's economy. With over 100 public and private companies involved in the rail industry the industry provides economic benefit to the country of around $7 billion per annum. Significant environmental and safety advantages to the rail transport mode also add to the net social benefit of the rail industry. McRobert & Tapp (1997) summarise the advantages of rail freight over road as per table 1:

Table 1: Summary of advantages of rail freight over road freight
McRobert & Tapp (1997)

Operating energy	factor of 3
Energy for infrastructure	factor of 2.4
Vehicle manufacture & maintenance	factor of 1.7
Displacement of other land uses	factor of 2
Life cycle carbon dioxide emissions	factor of 3
Fatalities associated with use	factor of 7

The Australian rail industry also holds overseas contracts worth about $0.5 billion.

The health and development of Australia's rail industry is vital to Australia's economic development and export competitiveness.

The framework set by the Commonwealth as a result of this inquiry will be critical to the achievement of allocative and productive efficiencies in rail and transport and to the achievement of a renewal of the rail industry through well crafted reform.

The role of government

The managing director of Tranz Rail New Zealand, Dr Francis Small, recently observed that "The danger in Australia is that rail privatisation will be fixated on rail as a separate mode of transport, unrelated to other modes. The insistence on separation of network and operators is a symptom of this fixation.....you run the risk of having a disintegrated rail system, a system skewed towards competition between rail operators rather than between rail and other transport modes" (address to Australian Government Rail Privatisation Conference, 21/5/97, Sydney). Because of the increasingly diverse and disaggregated Australian rail industry structure, three critical roles of government include:

◊ ensuring an integrated inter-modal approach to transport planning and policy development - a balanced vision is required that supports planned, integrated land use and transport solutions for

urban areas, along with a vision for interstate transport in the context of national economic , social and environmental objectives;

- ◊ facilitating effective and equitable competition between transport modes; and
- ◊ dealing with the important harmonisation issues of safety, telecommunications and operations. At the moment, each state has its own safety and operational standards and practices. For example there are 22 different safe working systems and 18 different radio frequencies in use on the interstate network.

The Intergovernmental Agreement on Rail Safety and recognition of Australian Rail Safety Standard AS4292 provides a foundation for progress in regard to consistent safety standards and practices. However this needs to be developed into a system of mutual recognition and accreditation as part of a 'one stop shop' approach.

Additional critical roles for national government include:

- ◊ taking decisions on rail and road corridor investments according to a common set of criteria and cost-benefit analyses;
- ◊ optimise investment in land transport infrastructure through evaluating and facilitating appropriate public and private sector projects and sources of investment;
- ◊ optimising sources and mix of private and public finance, as discussed under 2.9 and 5.1;
- ◊ dealing with uniform policy approaches and solving cross jurisdictional legislative issues; and
- ◊ minimising impediments to private sector investment arising from cross-jurisdictional and other issues.

The national government role in minimising impediments to private sector investment will include giving attention to the following issues:

- ◊ Ensuring sufficient tax effective incentives, which includes but is not limited to reform of section 51AD of the Income Tax Assessment Act (see section 3.4).
- ◊ Rectifying a situation in which there is little structure within which governments can encourage particular projects.
- ◊ Government needs to adopt a proactive and facilitatory role in relations to such issues as land acquisition, native title, and heritage issues. This will impact on time and cost management of major projects.

Government also has an important role to play in influencing community perceptions in regard to competition policy and micro reform. For reform to be successful there needs to be a community understanding of the value of the services they are getting, the requirements of National Competition Policy, and the many tools that can be used to deliver social and economic outcomes.

It is important to recognise the implications for the role of government of national competition policy and associated reforms. For competition policy to be effective there must be an effective arms length relationship between government and the rail industry. Government's role becomes one of identifying important economic, social or environmental factors that are not being fully accounted for in the market, and then either managing the regulatory framework to improve market function, and/or transparently funding clearly identified objectives through service procurement or CSO funding.

Competitive neutrality between road and rail.

An important factor to consider in regard to the effective and efficient use of rail is competitive neutrality between transport modes. This submission will demonstrate the fundamental links between this issue and the following issues:

- ◊ sound national transport strategy in regard to efficiency and effectiveness;
- ◊ appropriate rail infrastructure investment;
- ◊ appropriate rail access regimes; and

◊ attracting private investment to the rail industry

The Australasian Rail Association will be addressing the issue of competitive neutrality between road and rail in some detail. However Queensland Rail will emphasise some key points:

◊ Expenditure and cost estimates for all transport modes should include social costs and externalities, including safety, pollution, and congestion factors.
◊ There is strong reason to believe that there is significant under recovery of direct costs for heavy articulated road vehicles that compete with rail.
◊ The cost of road access is 15% of rail access, excluding diesel fuel excise which is paid by both road and rail.
◊ By paying the 18 cents per litre diesel fuel excise that the NRTC determined to represent a road user charge, rail is effectively subsidising road transport. Since 1982 the rail industry, which was previously exempt from diesel fuel excise, has been contributing over $150M per annum.
◊ It is essential that broad economic and social criteria be applied to both rail and road infrastructure investment. This point will be emphasised through discussion of the implications of allocative efficiency.

A range of studies indicate under recovery by heavy articulated vehicles in the range of 10% to 20% of cost structure. Queensland Rail has commissioned such research on the costs and recoveries associated with roads which are geographically parallel to rail routes in Queensland. Even when fuel excise is credited to cost recovery and even under generous assumptions concerning the safety costs of larger road configurations, the results are consistent with the above range of estimates. (Research by Ron Allen, 1997, is available to the inquiry.)

Road interests will argue that cost under recovery is off-set by taxation inequities, such as sales tax exemption status. Many industries apart from rail are exempt from sales tax. Even if sales tax is included in the calculation of industry relativities, there is strong reason to believe that the playing field is far from level. In this regard it is worth noting the findings of the BTCE (1988):

"Articulated vehicles failed to recover their avoidable pavement cost by over $750 million...the level of shortfall is still large for this group even if all the revenue items from table 5.5 are included (for example sales taxes, customs duties and stamp duties)".

These results could be regarded as dated, and an updated review of these issues by an independent body would be welcomed by Queensland Rail.

Similarly, the NTPT (1994, p.47) found that:

"the most striking features of this initial work are the relatively high taxes on rail, which must also meet its own infrastructure costs.....A difference in effective taxation of some eight percent implied by the research, is therefore relatively significant in rail's ability to compete with road on price".

In considering the range of perspectives on the road-rail playing field, and the respective taxes and charges applied to these modes, the Inquiry should consider that the weight of independent research (BTCE and NTPT included) strongly indicates a lack of inter-modal competitive neutrality that discriminates against rail. Queensland Rail supports an independent analysis of these issues, and considers the BTCE or the Industry Commission to be appropriate agents.

Road cost under-recovery can be responded to through regulation, through increased or different road user charges (a mass-distance charge), or through compensating investment in rail.

The implications of this submission are that compensating investment in national rail infrastructure by the Commonwealth should form part of an appropriate response, on the grounds of inter-modal competitive neutrality and on grounds of allocative efficiency. There is also a convergence of evidence, notwithstanding the complexities of the issue, of undercharging of long haul large vehicles.

It is acknowledged that the issue of road-rail competitive neutrality is complex and open to different interpretations. For this reason QR would support an independent and definitive study of the issue.

Modal share and modal shift

Rail's modal share of inter-capital land freight is less than 30% (by weight-distance) on the North-South corridor and more like 50% on the East-West corridor (BTCE, 1995, pp7-8). The poorer performance of rail on the north-south corridor reflects poor infrastructure standards. Current share is already declining and is in danger of faster erosion as a result of regulatory change. This submission argues that such erosion of rail's modal share is likely to be uneconomic from a national perspective.

The NRTC mass limits review, if implemented, will result in productivity gains to large road vehicles in the range of 5% to 10%, depending on vehicle type.. This will almost inevitably result in modal shift of freight from rail towards road when accompanied by corresponding increases in road user charges. Road interests will argue that these changes mean fewer trucks. But to the extent that road pricing remains inefficient, modal shift is likely to result in a greater number of large trucks on our roads. The consequences of such a shift needs to be evaluated in broad economic/social benefit terms.

An independent review of mass limits proposals in New South Wales, by Sinclair Knight Merz, has found:

- ◊ On the Sydney Melbourne corridor (NSW network) 5% of total rail freight could be expected to divert to road.
- ◊ On the Sydney-Brisbane corridor (NSW network excluding Newcastle-Maitland) 3% of total rail tonnage could be expected to divert to road.
- ◊ Preliminary results of a similar Queensland study indicate that m~~M~~odal shift implications are in the order of 4% loss of rail market share~~.~~

Loss of rail freight to road is only an undesirable outcome if there is a net social cost to this modal shift, after allowing for such costs as geometrics, pavements, bridges, congestion, safety, and other environmental costs. In this regard Sinclair Knight Merz (1997) research focuses on the direct costs of increased bridge replacement associated with a mass limits review. The paper estimates that NRTC option F would result in increased bridge replacement costs in the range of $275M to $515M in NSW (producing a potentially considerably larger cost annuity than NRTC estimates). The same study questions the effectiveness of air suspension in reducing pavement costs. Other costs associated with mass limits changes will include externalities of safety, congestion and pollution.

It should be emphasised that the interaction of mass limits effects with other forms of large vehicle deregulation (B-Doubles, B-Triples), in an environment of cost under recovery for large road vehicles, provides the potential for much larger modal shift. In a marginal and high fixed cost industry like non-urban rail freight, what begins as a gradual loss of market share can lead to a point of no return and a downward spiral of curtailment and retrenchment of services.

In this context, the east coast rail network is particularly vulnerable. With highway improvements between Sydney-Melbourne and the $3 billion upgrade of the Pacific Highway, rail will continue to lose market share to road unless rail improvements are made. Increased road freight haulage will increase road damage, congestion, fuel use, greenhouse emissions and road accidents. The Energy Research and Development Corporation (1993) estimated that if the Pacific Highway is upgraded as planned and there are no comparable investments to the parallel railway, then rail's modal share of the Sydney to Brisbane freight market will be almost halved, based on similar experience as a result of the Hume Highway upgrading. This translates to an extra 100,000 truck movements per annum, or an extra 130,500 tonnes of additional greenhouse gases.

At no stage has the optimal mix of expenditure on transport infrastructure on these corridors been considered. Rail has been left to justify meagre investment in largely commercial grounds whilst massive road investment is being progressed following consideration of broader social criteria.

Queensland Rail has commissioned research to assess the likely results and net social costs of ~~such~~ a loss of all contestable freight to road in Queensland. Ron Allen's work in 1996 estimates net cost, including direct costs (geometrics, pavements, bridges) and externalities (congestion, safety, environment) of at least $50M per annum. (In the light of Sinclair Knight Merz results, the Ron Allen research probably underestimated bridge costs associated with modal shift, and also made some generous assumptions about large road vehicle safety.) The research has relevance to national policy in so far as it indicates the kind of magnitudes of net social costs of modal shift that might be involved. The size of these effects underpins an allocative efficiency argument. *(This research is available to the inquiry.)*

Modal shift in the other direction (road to rail) was examined as part of the BTCE Transport & Greenhouse report in 1994. The BTCE did an economic evaluation of a scenario of spending $3.4 billion over the next 14 years to induce a transfer of up to 40% of intercapital road freight from road to rail. The study estimated a net social benefit of $2.3 billion by 2015, not including the uncosted benefits of cumulative reduction in carbon dioxide emissions.

Are environment considerations important? The issue of economic externalities.

The NTPT (1994) recommended that "All governments develop mechanisms for pricing for the use of transport infrastructure which reflect the costs of efficient provision of that infrastructure and take into account congestion and environmental factors in a transparent way" (NTPT, 1994, recommendation 10, p.53). Similarly, EPAC (1995) recommended that in regard to the role of government in infrastructure development, "project appraisal guidelines should spell out how to account for social and environmental impacts in the decision making process" (EPAC, 1995, p.96).

Economic externalities that need to be considered in transport sector strategy include carbon dioxide emission, urban and non-urban congestion, and safety. In terms of national interest and Commonwealth policy, it is important not to overlook net social benefits and externalities associated with modal share of the urban passenger task.

Transport is responsible for 25% of Australia's greenhouse emissions produced through activities involving use of energy. According to the BTCE (1994), transport emissions are growing at 1.7% pa (1990-1994), almost treble the growth rate of total emissions (0.6% pa). According to the ABS, Australia has the third highest per capita emissions for transport in the world, exceeded only by Canada and the USA.

Whilst rail transport represents nearly 5% if all the urban passenger tasks, it is responsible for only 0.1% of urban greenhouse gas emissions (Apelbaum Consulting Group Pty Ltd). Clearly a shift of urban transport to rail would have a major positive improvement to the environment.

Interurban rail freight transport has advantages over road transport in terms of energy efficiency and greenhouse impacts. According to the BTCE (1994) the impact of a major modal shift in intercapital freight may not be big in terms of percentage of total national greenhouse emissions (reductions of around 0.5%). However it is worth emphasising that this percentage translates to annual savings exceeding 200 million litres of diesel fuel in Eastern Australia by the year 2014-15, and such fuel savings would be a valuable contribution to Australia meeting formerly agreed Toronto targets. These greenhouse savings are also associated with other major net social benefits, valued at $2.3 billion, as specified in the BTCE report on greenhouse.

Apelbaum Consulting Group Pty Ltd also conclude that non-urban rail freight emits 24.35 giga-grams of CO2 per tonne-km compared to articulated Trucks of 80.62 giga-grams per tonne-km. This demonstrates that rail emissions are less than on-third of articulated trucks.

Ron Allen's research into the impact of losing the contestable non-urban freight market to road in Queensland identified costs of $50M per annum. This included cost of greenhouse emission

externalities at $2M per annum, derived from an increase in carbon dioxide emissions of 76,000 tonnes per annum.

This same research identified safety externalities as the biggest external cost, followed by non-urban congestion and capacity costs and greenhouse gas emission costs. These magnitudes could be extrapolated to the national freight task as indicative only. A robust evaluation at a national level is necessary.

Road accidents cost Australia $6.1b annually, compared to rail accidents which cost an estimated $69m annually (BTCE, 1993). Moreover the rail accident cost figure includes level crossing accidents. Between 1996 and 1997, the number of road fatalities involving articulated trucks increased by 7%. Articulated trucks are involved in 9% of Australia's road fatalities, contributing $144m to the road fatality bill (refer ARA fact sheet no.2, 1997). Clearly the externalities of safety are a major factor in transport policy, particularly in regard to policy likely to impact on modal split. Only some of these safety costs are 'internalised' by insurance. The remainder of the cost is borne by the victims and the community. It is suggested that further study is needed to quantify the proportion of these costs

Congestion cost externalities involve non-urban congestion and urban congestion. Whilst the latter is of less direct relevance to the inquiry it should not be overlooked as an issue. The BTCE (1992) estimates costs of congestion in capital cities at over $2b (BTCE, 1992, p.39) and therefore very large external costs of this kind are potentially involved in national transport strategy. This will be of relevance to a Commonwealth rail transport inquiry in at least two ways:

1. Although urban passenger transport is more a state government responsibility, the Commonwealth has an interest in overseeing and reviewing issues of urban environment. From this perspective the Commonwealth will take an interest in the impacts of national transport policy on urban congestion (not just non-urban congestion), and on urban air pollution (not just non-urban contributions to greenhouse gases)
2. Infrastructure for non-urban and interstate rail freight can have a major impact on capacity constraints for urban rail passenger services, and vice versa. Major rail problems and bottlenecks are developing in the Brisbane metropolitan area. This is being dealt with by placing restrictions on freight and long distance passenger movements during peak commuter periods. This leads to sub-optimal departure and arrival times for freight trains.

Issues requiring further research, but which will almost definitely favour rail in terms of economic impact are noise emissions and land-use for corridors. Rail corridors consume much less land than roads and have a greater peak capacity. This issue will be critical in urban planning as our cities become more and more congested.

The inquiry should set in place a framework for appropriate inter-modal transport infrastructure project evaluation, which outlines a cost-benefit methodology consistent with accounting for externalities and environmental costs, and which takes into account the interaction of urban and interstate capacity constraints and utilisation.

Allocative efficiency and productivity efficiency

Rail reform can produce benefits from maximising allocative efficiencies (optimising resource allocation for net social benefit, the 'doing the right thing' gains). It can also maximise productivity efficiencies (extracting maximum outputs from the existing allocation of resources, the kind of productivity gains achieved through competition reform, the 'doing things right' gains). *Research into road and rail relativities indicates that the magnitude of externalities (particularly in regard to safety and to congestion) involved in modal shift could lead to gains through allocative efficiencies in excess of the kind of gains to be expected through productivity based efficiencies* . The rail reform agenda has tended to focus on putting in place the framework for potential gains in productivity efficiency. This has been especially through national competition policy applied to above rail

operations. However potential gains in allocative efficiency may ~~are likely to~~ show greater returns, and could prove critical to providing a platform for subsequent productivity based gains.

It follows that if economies of transport are to be optimised, it is imperative that there be a robust analysis of optimal modal split in broad economic terms. This needs to be assessed by an independent body at Commonwealth level, keeping in mind the dynamics of competition and the nature of the task.
Once optimal modal split has been assessed, this will provide a framework for defining the infrastructure standards and network access pricing required to attract the optimal amount and type of freight to rail.

This framework will provide a rationale for Commonwealth investment strategy in regard to rail infrastructure and road infrastructure**.** The inquiry will be aware that Commonwealth allocation of resources from 1975 to 1995 was $32 billion to road infrastructure and a mere $1.5 billion to rail infrastructure.

Establishment of research and advisory body 'AUSTRAIL'

The Rail Summit has recommended the formation of an independent, non-government research and advisory body. This should be a well targeted body with a limited charter. High priority issues for the AUSTRAIL research agenda should include:

- ◊ A rail infrastructure study with particular emphasis on the scope to increase mass limits (through axle loadings), dimensions, line speeds and transit times
- ◊ Actions necessary to harmonise communications standards, safe working systems and operational procedures
- ◊ Cost: benefit analysis of rail system enhancements to establish the economic benefit of various options to ensure optimal expenditure
- ◊ Analysis of allocative efficiencies and optimal modal split in broad economic terms

Once the programme has been achieved then the body should be closed down.

Should rail operations be separated into discrete entities?

Queensland Rail believes that there are advantages to an integrated structure, including factors of optimal size, economic value, lower transaction costs and efficiencies, as well as safety. Vertical integration best accommodates the high level of interdependencies that exist between infrastructure and operation. Within what is now a pluralist Australian railway scene, there are opportunities to explore and compare the advantages and disadvantages of a diversity of railway structures. Both integrated and non integrated railways have the potential to operate commercially, competitively, effectively and efficiently within a framework that maximises both allocative and productive efficiencies.

There are numerous examples of competitive and efficient integrated railways, many of which set the industry benchmarks. These include north American railways such as BNSF and UPRR (both recently merged into different conglomerates), and closer to home is the integrated Tranz Rail in New Zealand.

Clearly disaggregation is not a pre-requisite for best practice. Rail industry structures should be disaggregated only when demonstrable competitive benefits outweigh the benefits of integration. It is not believed that the benefits would outweigh the costs of disaggregation in Queensland.

Definitions and financing of CSOs

The structure of CSOs is important in regard to issues of access charging and attracting private operators: As discussed in section 4.2, recent experience in NSW has highlighted that an infrastructure charge sufficient to ensure maintenance and replacement of interstate rail assets, with some exceptions, will be too high to be acceptable in the market place. In such circumstances a 'below rail' or infrastructure subsidy is necessary if rail modal share is to be sustained at a level regarded as providing a net social benefit and/or if private transport operators are to be attracted to the rail mode.

The provision of below rail CSO is particularly important for low density lines. When there is substantial excess capacity on the line it is allocatively inefficient to provide the subsidy to the few train operations on the line, as this would create the following problems:

- ◊ It places the risk of third party traffic volatility on the last remaining operator, who has no ability to manage the risk. For example if the second last operator were to abandon the line, the last operator would face an abrupt increase in the access charge as it must pay the entire fixed cost.
- ◊ Any potential for increasing traffic on the line is diminished greatly by the barrier to entry posed by the incumbent's access to subsidy funding.

Provisions of below rail CSOs should allow access prices to be charged that recognise the realities of the rail access market and counterbalance the lack of intermodal competitive neutrality. The level of funding of rail industry CSOs and the structure of such CSOs (in regard to the balance of operator/below rail funding) for the national rail asset, should be determined with regard to:

- ◊ consideration of national economic and social objectives, recognising external economies and diseconomies;
- ◊ a realistic assessment of the capacity to attract private investment to the maintenance, replacement and upgrade of the infrastructure asset; and
- ◊ consideration of rail access prices that recognise the realities of the rail access market
- ◊ consideration of density and capacity issues as outlined above.

Innovation

H~~*Section to be progr*~~istorically there has never been such a concentration of intellectual and technological effort aimed at improving supply chain performance. Electronic data interchange , point to point scanners, flexible manufacturing , automated warehousing, integrated procurement and scheduling systems which cross organisational boundaries through the internet, and a host of other innovations are creating technologically driven environmental change.

Transport and logistics businesses have opportunities to diversify into rail operations and railway owners and operators have opportunities to extend into broader transport and logistics activities . These developments combined with technological change provide opportunities for service innovation and the redefining of the rail and transport industry . It is through such innovation, along with the achievement of best practice infrastructure standards, that rail is likely to recover the modal share lost ground of recent years.

An industry structure that facilitates new entrants from the broader tra nsport and logistics sector, that facilitates joint ventures and private sector involvement, and that links appropriate returns to the risk bearer, will encourage service innovation and technological innovation.

Opportunities to increase private sector investment in rail.

Queensland Rail working with the private sector

Queensland Rail is progressing a range of ventures with the private sector. These include:

◊ Joint venture with VSOE (Venice Simplon-Orient-Express) for the Great South Pacific Express
◊ Brisbane Airport rail link
◊ Surat basin infrastructure development

These ventures highlight the potential for Government Owned Corporations and private sector organisations to work together.

Encouraging private sector investment in rail

The Rail Summit's agreement to operate the interstate rail network as a single network (including investment and access) is an important step to encourage private sector investment in rail. Further challenges in regard to encouraging private investment include:

◊ effective progression of simplified and uniform regulations and operations, as discussed in section 2.2;
◊ inter-modal and intra-modal competitive neutrality , as discussed in section 2.3 to 2.5;
◊ appropriate market based access pricing, as discussed in section 4;
◊ addressing the issue of run down rail infrastructure, particularly on the east coast, as discussed in sections 2 and 5;
◊ positive facilitation by government of private sector proposals for development of the east coast Melbourne to Brisbane inland rail bridge with extensions to Gladstone and possibly Mt Isa/Darwin (see appendix 1 for a brief review by Queensland Rail of the inland rail bridge); and
◊ effecting a role for government as outlined in section 2.2.

Models of Participation

As well as the opportunities identified for involvement of the private sector in above rail operations, a range of possibilities may develop from the need to upgrade infrastructure standards on the national network to achieve optimal modal split, as discussed elsewhere in this submission.

Queensland Rail recognises the need for increased private sector participation and increased contestability within the industry. Mechanisms for achieving this include:

◊ third party access
◊ franchising and concessions
◊ short line operations
◊ outsourcing/contracting out
◊ infrastructure concessions
◊ build-own-operate and build-own-operate-transfer (BOOT) schemes
◊ private ownership

All of these options need to be assessed on a case by case basis within a framework similar to the four broad tests specified by Argy (1997) (see section 5.3).

Reform of Section 51AD of Income Tax Assessment Act (ITAA)

The ITAA does not recognise Tax Equivalent Regime (TER) entities as tax paying entities. Therefore Queensland Rail is still an exempt body under the ITAA. Section 51AD affects the deductibility of costs attributable to the ownership of property in dealings with tax exempt bodies. The prime test in this section is whether a tax exempt body controls goods or services produced by the tax payer.

In terms of the national rail network, this Section makes it difficult (if not unprofitable) for the private sector to directly finance and own a major railway deviation. The effect for private sector rail infrastructure owners is their costs may not be deductable if the railway operators using that infrastructure are tax exempt bodies and are deemed to control the use of the railway. This may discourage private sector rail infrastructure owners form allowing open access to their infrastructure.

Section 51AD is therefore a significant impediment to private investment in rail infrastructure connected to the national network. This could prove to be a major constraint in achieving infrastructure standards commensurate with allocative efficiency. Legal options to resolve this are - Government owned rail operators who are TER taxpayers should not be tax exempt bodies in the ITAA or delete Section 51AD or amend to exempt its application to tax exempt bodies..

Access and utilisation of the rail network

Access regimes and impediments to utilisation

The effective management of the nNational rRail asset is critical to provide incentive for modal share consistent with optimised allocative efficiencies. This will entail both adequate infrastructure standards and appropriate access pricing. Uniform rail operating standards are also critical to the efficient operations and customer focus that will attract non-urban freight. For these reasons Queensland Rail is pleased to note the support for a single point of entry for rail operators, effectively providing a ‘one stop shop’ for access to the interstate standard gauge rail network between Brisbane and Perth.

The inquiry needs to deal with a fundamental dilemma, which particularly applies to the East Coast route between Melbourne and Brisbane. The dilemma is that an infrastructure charge sufficient to ensure maintenance and replacement of interstate rail assets is too high to be acceptable in the market place, given the lack of competitive neutrality in with long haul road freight. This issue was highlighted by the need for an arbitration process between the Rail Access Corporation (NSW) and National Rail. The outcome of this arbitration, as well as subsequent agreement between RAC and the NSW Government in regard to infrastructure CSO arrangements, serves to emphasise the need for government to financially support rail infrastructure if rail operations are to be commercially viable to above rail operators.

One stop shop

Queensland Rail supports the establishment of a national body to ensure consistency and harmonisation on the interstate standard gauge rail network with specific regard to pricing, investment and access. However, it is noted that the identified sum of $250 million for both the establishment of such a body and for achieving infrastructure performance standards, falls far short of the investment required. Moreover, the allocation should allow for not only investment costs, but also establishment costs and operating costs including maintenance. Funding falls critically short of the ongoing maintenance of the corridors in question.

The objective of a national approach to interstate access should be to achieve an effective open access

regime for interstate rail freight with a single point of contact to arrange access to the interstate standard gauge rail network. In this regard it needs to be emphasised that :

◊ considerable work will be required to overcome the complexities of operating across borders, in terms of operating systems, safety systems and accreditation, telecommunications and so forth; and
◊ interstate operations should not be focused on at the expense of intrastate operators;

Queensland Rail is supportive of setting long term goals for interstate access. We recognise the need for incremental investments, especially in regard to the fundamentally deficient and primitive standards between Sydney and Brisbane. However these investments in the north-south corridor may need to be evaluated in the context of a new inland Melbourne-Brisbane corridor.

Queensland Rail considers that accountability and responsibility for the interstate network must be analysed. In effect, operation control must rest with those who have financial responsibilities.

The model currently being contemplated by existing infrastructure owners where interstate access is managed by a single entity (Access Australia) , jointly controlled by infrastructure owners is supported in principle by QR. It is recognised that this approach is not optimal from a purely interstate perspective. However, the Access Australia model does deal with the following deficiencies of other models.

◊ Caters appropriately for intrastate interests where these predominate
◊ Appropriately deals with metropolitan access
◊ Aligns commercial contract and financial accountability.

Access regime - Queensland

The Queensland Competition Authority Act was passed in May 1997. The Queensland Competition Authority will perform several functions associated with National Competition Policy - prices oversight, competitive neutrality, and third party access. Queensland Rail supports the direction of the State regime and is developing an Access Undertaking in compliance with the provisions of the QCA Act.

Interstate access could be via a separate interstate rail access code submitted by infrastructure owners.

Which access regimes are likely to be suitable for adoption by rail?

Confusion has been created by comparing other industries , such as gas and electricity , with rail. Rail is not an homogenous product which can be easily stored and sold. Moreover there are tangible and inherent safety issues which must be taken into consideration.

Many concepts espoused in other industry access regimes cannot feasibly be tailored to rail. For example, the issue of secondary markets. In regard to rail access the primary market is in its infancy stages without adding further complexity.

Queensland Rail advocates market pricing recognising that railway operators competing in different end markets have a different capacity to contribute to the fixed costs of operating railway infrastructure. In establishing access prices, access providers should be able to discriminate between railway operators competing in different end markets.

Investment and ownership arrangements

Land Transport Infrastructure Authority

Queensland Rail recommends building on the suggestions of the National Transport Planning Taskforce. Consistent with this view would be the establishment of a Land Transport Infrastructure Authority which would:

- ◊ responsibility to establish an investment decision model based on broad economic, social and environmental criteria;
- ◊ make decisions on rail and road corridor investments according to a common set of criteria and cost-benefit analysis;
- ◊ optimise investment in land transport infrastructure through evaluating and facilitating appropriate public and private sector sources of investment.

This would be consistent with the trend to intermodal transport funding and planning as reflected by the U.S. Intermodal Surface Transport Act (ISTEA) and the establishment of Transfund in New Zealand. In July last year the New Zealand government established Transfund to spend money raised from road users. However Transfund has the power to determine the most efficient allocation of this money, and this has included allocations to rail infrastructure pro jects in Wellington and Auckland (see "Rails", September, 1997).

Ownership

Queensland Rail recognises that if all roads lead back to government funding then infrastructure will be starved. As emphasised by the Queensland Under-Treasurer, Doug McTaggert, "the private sector's active participation in the provision, operation and possibly ownership of what might have traditionally been labelled public infrastructure.....allows a considerable enhancement of the total pool of capital available to fund infrastructure development and therefore a significant increase in the amount of infrastructure that is provided" (address to IAQ Seminar, 22/5/96).

However, prerequisites for private sector ownership should include the four broad tests for optimal private sector involvement specified by Argy (1997); demonstration beyond reasonable doubt that:

- ◊ such involvement would generate a significant improvement in efficiency (better use of resources) without any serious loss of effectiveness (consumer satisfaction);
- ◊ ...and/or would allow a bringing forward of socially desirable or economically productive infrastructure and associated net community benefits;
- ◊ these efficiencies/availability gains would outweigh any genuine capital cost disadvantages of the private sector relative to the public sector; and
- ◊ wider public interest concerns can be adequately accommodated within an environment of private ownership.

It follows that private sector involvement and private sector ownership should be evaluated on a case by case basis rather than being driven by ideological commitment to either public or private ownership per se. One of the major considerations in regard to the rail industry is the inadequacy of purely market mechanisms to deal with issues of economic externalities, and important environmental and planning outcomes.

Are existing levels of investment in rail appropriate?

Material submitted under sections 2.1 and section 5 emphasises the low standard of rail infrastructure

in Australia and the inadequate funding of rail infrastructure investment. For reasons outlined in these sections, significant elements of rail infrastructure need to be treated as inherently non commercial, in the sense that without government intervention or incentives private capital will not be attracted on the basis of achieving commercial rates of return. In this respect, rail infrastructure should be evaluated economically in terms of benefit cost ratio, taking into account net social benefits including the external economies of pollution, congestion and safety. Rail and road infrastructure evaluation should be based on analogous criteria and analogous elements of cost and benefit.

In particular, section 2.4 has indicated that Australia currently faces a critical period in terms of investing in rail infrastructure to avoid major erosion of rail' s share of non-urban freight, in the pursuit of important net social and economic benefits.

The recent Rail Summit has referred to a sum of $250 million over four years to improve our national rail infrastructure~~infrastrucure~~. However Queensland Rail believes this is most unlikely to achieve the kinds of infrastructure performance targets identified at the Summit. These targets were to achieve within five years:

- ◊ less than 2% of track subject to temporary speed restrictions;
- ◊ at axle loads up to 21 tonnes, a maximum speed of 115kph and an average speed of 80kph;
- ◊ at axle loads between 21 tonnes and 25 tonnes a maximum speed of 80kph and average speed of 60kph; and
- ◊ train lengths of 1800m on the east-west corridor and 1500m on the north-south corridor.

~~This compares to~~An efficient, competitive land transport system in which rail, either public o r private, is competing effectively with road, requires much more investment in mainline rail infrastructure. Investment should be aligned with the NTPT commissioned BTCE(1995, p.77) findings:

> *"Combining the terminal investments with the linehaul investments considered as warranted, the total estimated investment needs over the next 20 years for the rail infrastructure studied is expected to be in the order of $3.4b"*

The BTCE (1994) has elsewhere estimated that an investment in rail infrastructure of $3.4b over 14 years would have a net social benefit of $2.3b. The NTPT report identified the Melbourne-Sydney and Sydney-Brisbane corridors each warranting $1b worth of upgrading in terms of curve and grade easing, lengthening of crossing loops, improvements to signalling systems, and general upgrading of track quality. In particular, the report noted tha t deficiencies of the Sydney-Brisbane corridor were of such magnitude that the corridor may not survive as a freight alternative unless improvements are made.

It is worth noting further evidence of the need to upgrade Australia's mainline rail infrastructure, provided by private enterprise users of the network. BHP Transport's submission to the Senate Inquiry into the Continuing Role of the Commonwealth in the Australian Rail System, highlighted concern that the Federal government's rail reform measures (essentially privatisation of Australian National and National Rail Corporation) did not address the need to maintain and upgrade rail infrastructure "to a level which will provide the rail system with the ongoing capability to deliver quality services on a sustainable basis" (BHP, 1997).

Nationally significant infrastructure

It is important to recognise that the infrastructure funding issue, in the context of national transport strategy, includes nationally significant rail infrastructure, not only the main interstate standard gauge line. Nationally significant rail infrastructure should include Queensland's main North Coast line and the Mt Isa to Townsville line.

Characteristics of International Best Practice in Rail

Infrastructure as the foundation for best practice

It follows from the perspective presented that the foundation of best practice rail operations needs to be best practice infrastructure standards and capacity. Best practice infrastructure standards will lead to best practice operator productivities and best practice cost recovery. In other words, the potential gains of the allocative efficiencies from below rail reform, will provide a platform for some of the productivity efficiencies of above rail reform.

In its present condition, the mainline interstate rail track in Eastern Australia is not capable of supporting efficient and competitive rail freight operations, and is almost certainly not capable of supporting an optimal modal split. Government railways in Australia fall far short of US and Canada Class 1 railroads in terms of speed-weight and overhead clearance standards. Fast Freight Train standards (FFT) are defined as gradient to 1 in 66, no curve tighter than 800 metres, to allow through running speeds of 115 kmh. The East-West corridor generally meets FFT standards, whilst the North-South corridor does not.

FFT standards are a relatively simple but useful measure of infrastructure performance measures for benchmarking. However a range of other characteristics can also be important in terms of understanding capacity for strategic planning purposes. The analysis and definition of capacity is more complex and ambiguous for rail infrastructure than for road infrastructure. However other important factors include - maximum axle load, loop lengths, greatest distance between passing loops, track class and track type (rail weight and sleeper type), clearances (is double stacking possible), train control system and signalling system.

Examples of best practice

Worldwide the most commercially successful railways are integrated - notably the railways of USA, Canada, India, New Zealand and Western Australia. However the complexities of benchmarking and defining best practice in the rail industry need to be highlighted. Comparisons need to be controlled for such variables as: differences in gauge, differences in gradients, treatment of capital versus operating costs, approaches to asset valuation, differences in approach to ownership of rollingstock, dominant traffics and traffic mix, and the impact of the regulatory environment on inter-modal competition.

The benchmarking of Queensland Rail's Coal & Minerals Group against the USA's Burlington North Sante Fe (BNSF) railroad have highlighted these complexities. There is a need for caution when evaluating simplistic comparisons of freight rates or operating costs.

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