National Secretary
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ref. RTSA-NS-108

14 August , 2006

Mr Gary Banks
Commissioner,
Road and Rail Infrastructure Pricing Inquiry
Productivity Commission
LB2 Collins St East
PO Box 546
MELBOURNE VIC 8003

Dear Mr. Banks

Re: INQUIRY TO REVIEW ECONOMIC COSTS OF FREIGHT INFRASTRUCTURE AND EFFICIENT APPROACHES TO TRANSPORT PRICING.

Please find enclosed the RTSA's submission to the above inquiry.

Yours sincerely

(Mr.) John Dring CPEng, MICE

National Secretary

INQUIRY TO REVIEW ECONOMIC COSTS OF FREIGHT INFRASTRUCTURE AND EFFICIENT APPROACHES TO TRANSPORT PRICING.

1. Introduction

The Railway Technical Society of Australasia (RTSA) is a technical society of Engineers Australia. The RTSA now has over 800 members across Australia and hosts a major Conference on Railway Engineering (CORE) every two years. The RTSA is a national body set up with state chapters and represents a wide constituency of technologists, professional engineers and managers in rolling stock, rail infrastructure and operations.

The RTSA promotes the science and practice of railway engineering and related technology. The RTSA seeks the advancement of the rail industry through excellence in railway engineering and technology, and through its industry and community education programs.

The RTSA aims to foster mutual technical development, networking, the expanding and sharing of knowledge, specialist recognition, the establishment of national links and the promotion of expert opinion and influence relating to all facets of the rail industry. Adequate investment and sound government policy are essential for the future health of the rail industry.

The RTSA welcomes the current inquiry into road and rail pricing and notes the submissions to the inquiry by Engineers Australia and the Australasian Railway Association. The RTSA commends both of these submissions and wishes to put forward some specific issues related to rail.

2. Human Capability

The RTSA focuses on the human capital side of rail, specifically the technical capability and development of its technologists, engineers and managers for rail viability. The RTSA will be particularly pleased to see arrangements flowing from the COAG Intergovernmental Action Plan for human capital and commends the Inquiry to RTSA's research in 2000 on Post-graduate courses in railway engineering: *The needs of Australian engineers and rail organisations* (copy attached as Appendix A).

3. Adequacy of Infrastructure

The Inquiry's Issue Paper refers to COAG's communiqué on 10 February 2006 as its terms of reference. The communiqués states in part, for the Productivity Commission to look at how to '*…improve the efficiency, adequacy and safety of Australia's transport infrastructure…*'

In terms of 'adequacy' the RTSA commends the Productivity Commission to Engineers Australia Infrastructure Report Card (2005). This provides clear evidence of rail and road adequacy. Rail is rated C- (improved from a base in 2001 of D-)[1]. National roads is rated C+ (improved from a base of C in 2001). This report card indicates that rail infrastructure requires major changes in its configuration to meet existing and future demand. The recognition that infrastructure is inadequate is important, as it is a measure of the quality of infrastructure in relation to the significance of rail services (and the future role of rail), within the transport task.

The RTSA believes that much of the North – South line is inadequate for its intended task and for the future role rail needs to play. Infrastructure measures for this corridor have been suggested as noted in page 248 of Volume 3 of the *National Guidelines for Transport System Management In Australia* released in 2004 by the Australian Transport Council. The RTSA also notes the recent Infrastructure Action Agenda of the Australian Logistics Council, which also questions the adequacy of intermodal terminals.

The RTSA however commends the current investment in infrastructure to improve the adequacy of rail infrastructure.

It is clear that without government grants or equity into the ARTC the interstate rail infrastructure could not be upgraded. The funding provision of rail infrastructure is provided partly by retained earnings and debt by the ARTC, as well as grants from the Commonwealth Government. Access pricing has not been sufficient to fund all the necessary infrastructure upgrading.

Intermodal rail market share is highly sensitive to pricing and quality of service (transit times). The balancing of regulated access pricing and adequacy of infrastructure is a constant challenge for the long-term viability of rail.

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[1] C = Adequate: Major changes required in one or more of the above areas to enable infrastructure to be fit for its current and anticipated purpose, D =Poor Critical changes required in one or more of the above areas to be fit for its current and anticipated purpose

4. Efficiency and Pricing

The RTSA questions the economic merit of Depreciated Optimised Replacement Cost (DORC). The RTSA made a submission to the Productivity Commission's 2000 inquiry on National Access Regimes, in relation to competitive neutrality and at that time noted BHP Petroleum's submission questioning the legitimacy of DORC in terms of economic efficiency.

Although the RTSA is sympathetic to the ARTC using such an instrument to set access pricing in the absence of competitive neutrality (to assist in infrastructure provision), there is doubt as to how DORC would fit into an overall framework between rail and road.

Setting access prices based on DORC and requiring 'State Owned Corporations' to deliver dividend payments appears to undermine overall economic efficiency and not provide a solid basis for future infrastructure needs.

The RTSA acknowledges and commends the current arrangement between the ARTC and the Commonwealth Government, in which the Commonwealth Government does not require dividend payments, and that ARTC profits remain as retained earnings for future infrastructure investment.

The RTSA would ask the Productivity Commission to clearly articulate the basis of DORC in the principle of economic efficiency.

The RTSA supports the rail industry's position regarding user charges for rail and heavy road vehicles in its campaign for competitive neutrality. Technologies are now available that allow for the recovery of road maintenance costs based on a mass-distance basis. Evidence in European countries demonstrate that these technologies are effective in bringing about a more rational approach to road funding and a more balanced approach between rail and road mode share.

As a first step basic distance and/or mass differential charging system for heavy vehicles could be done in conjunction with an extended Safe-T-Cam network.

The RTSA suggests that the Productivity Commission look widely at simple and effective road user charge technologies. As experienced with the introduction of the German road user charge systems implementation of such systems can be expensive and complicated. However having a national approach set by COAG can ensure a consistent and seamless technological and policy approach to road user charging.

5. External Costs

In earlier submissions to the Productivity Commission, the RTSA has noted estimates of external costs of road and rail freight transport. The ARTC 2001 Track Audit discussed six external costs comprising accidents, air pollution, noise, congestion, greenhouse gases and unrecovered road system costs. Revised costs follow in cents per net tonne kilometre.

	Road Cost (Qld Transport (2003) Rail Studies)	**Road Cost** (ARTC Track Audit)	**Rail Cost** (Qld Transport (2003) Rail Studies)	**Rail Cost** (ARTC Track Audit)
Rural	1.673¢	1.123¢	0.094¢	0.04¢
Metro	1.906¢	1.326¢	0.128¢	0.074¢

1. **References:** Queensland Transport (2003) Rail Studies, "Land Freight External Costs in Queensland'

These estimates are now conservative. Further discussion is given in Volume 2 (pages 62 and 87) of the *National Guidelines for Transport System Management In Australia* released in 2004 by the Australian Transport Council, and the ARA's 2005 report 'The future for freight'. Line haul pricing frameworks that ignore the social costs of trauma accidents and costs of pollution end up promoting ‘technical efficiency’ improvements in the production process (such as higher road mass limits, use of longer road vehicles and support for infrastructure capacity upgrades). This is opposed to addressing the most appropriate mode of transport.

6. Energy

The RTSA suggests that there are strategic issues related to energy efficiency and oil dependency (in moving both people and freight) that are influenced by infrastructure pricing. Cost-effective energy efficiency in the transport sector is not only a function of the conversion of energy into effort but also a function of efficient use of energy for a given transport task. Ultimately the conversion of energy and the levels of energy use (as an input for a given transport task) revolve around the pricing inequities between rail infrastructure and road use. For although rail is clearly energy-efficient in the line haul freight task compared with road (about 3 tkm/MJ rail and about 1.2 tkm/MJ for road (where

MJ=Megajoule and 1 litre of diesel = 41.77 MJ Full fuel cycle)), pricing mechanisms conspire against rail to perpetuate and encourage overuse of road transport.

7. Conclusion

The RTSA welcomes this inquiry and believes, with the support of COAG there is a real opportunity for further reform and improvement in freight land transport.

APPENDIX A Post-Graduate Courses in Railway Engineering: The Needs of Australian Engineers and Rail Organisations