SUPPLEMENTARY SUBMISSION TO THE PRODUCTIVITY COMMISSION RE REVIEW OF NATIONAL COMPETITION POLICY ARRANGEMENTS

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1. This supplementary submission will draw on research conducted at the University of Wollongong and supported, in part, by the Rail CRC, the Australian Research Council and the former NSW Rail Infrastructure Corporation. However, it does not necessarily reflect the views of any of these organisations. This submission will also follow up on questions relating to land transport raised by the Productivity Commission in two inquiries in Sydney (Energy Efficiency November 16 and National Competition Policy November 30).

2. In the Discussion Draft for the Review of National Competition Policy Reforms, it is stated on page 25 that *"Implementation of the NCP road transport reforms is almost complete"*. The reforms cite six areas including heavy vehicle charges. It is suggested that whilst uniformity has been achieved with heavy vehicle charges, much more attention needs to be paid by Government to the area of road user charges for heavy vehicles (both the total receipts and the attribution of charges to various vehicle types).

3. In this area, the following quotes are of note. These are in addition to comment already made by several participants to the current inquiry on heavy vehicle charges:

> The Industry Commission (1995 The growth and revenue implications of Hilmer and related reforms p345) noted *"In the context of Hilmer, the degree to which the proposed charges recover the costs associated with maintaining the road system attributable to heavy vehicles imposes implications for other transport modes, most notably rail, under the competitive neutrality requirements. For example, if the level of cost recovery, after making allowances for community service obligations and externalities, are not similar for road and rail transport then one transport mode will enjoy an artificial competitive advantage over the other."*
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> Professor Hilmer (at the William Fraser Commemorative Address, Chartered Institute of Transport, Sydney, 29 September 1995) regarding the road freight industry. *'The road sector does not fully pay for the road damage and externality costs (Inter-State Commission 1990) and this may affect potential intermodal competition with rail especially.'*

4. In the Discussion Draft for the Review of National Competition Policy Reforms, the topic of achieving a freight transport system that is neutral across modes is addressed on page 183 and subsequent pages.

The observations on page 183 of this report re the lack of investment on the North - South corridor are supported. Some comments on contestable freight follow in Appendix A which notes, in part *"The major constraints to rail assuming more of Australia's land freight task is considered to be the severe speed weight restrictions imposed by the track linking Australia's three largest cities, and, lack of competitive neutrality. Over-regulation and lack of harmonization between the States is a further constraint to rail winning more land freight."*

5. Sydney - Melbourne is the most important intercity transport corridor in Australia. However, the state of the rail track linking Australia's two largest cities of Sydney and Melbourne is nothing short of a national disgrace. The Sydney - Melbourne track is some 960 kilometres in length, of which some 643 km is in New South Wales, and 317 km in Victoria. As observed by former Prime Minister, the Hon Gough Whitlam (1991, Abiding Interests)*"...there are no cities in the world as close to each other with such large populations as Sydney and Melbourne which are linked by so bad a railway."*

In 1968 it took a freight train with a change of locomotives at Albury 13.5 hours to go from Sydney to Melbourne. Today, despite more powerful and through running locomotives, it takes 14 hours. The main reason got the extra time would appear to be due to increased rail congestion in Sydney. A freight train, between Glenlee (53 km south of Sydney) and Junee has to contend with steep ruling 1 in 40 grades (facing trains in both directions) and extensive tight radius curvature. Between Glenlee and Albury there is literally, on average, a curve for every kilometre with no less than 138 kilometres of track having curvature of less than 800 metre radius. On this track, the trains twist to the left the equivalent of over 30 circles and twist to the right over 30 circles. The track fails to meet Fast Freight Train standards for 183 km or 31 per cent of total track track length where it has grades steeper than 1 in 66 and/or curvature tighter than 800 metres. Moreover, nearly 17 km of track at various locations have grades steeper than 1 in 66 on curves tighter than 800 metres. Such locations of track with both steep grades **and** tight curves may be called ***'red sectors'.***

Much of the track between Menangle (and its 140 year old rail bridge) and Junee needs rebuilding to modern engineering standards. In fact the track between Campbelltown and Cootamundra was rebuilt, mostly during the 1910s with a program of duplication with deviations to ease the grades for slow moving steam trains. The rebuilt track over 20 kilometres of distance, mostly on tight radius curves. The poor track geometry is coupled with an antiquated safeworking system between Harden and Wallendbeen, low overhead clearances, and other shortcomings. More information on this track is in Appendix B. This notes, inter alia, over the last 25 years an average of one major study per year that deals fully, or in part, with Sydney - Melbourne rail track upgrading for freight trains.

In 1970-71 the average truck took 14.7 hours to move between Sydney and Melbourne with an average load of 14.8 tonnes (ref BTCE, 1990, Freight flows in Australian Corridors). After an investment of over $5 billion in todays terms since 1974 (as part of the National Highway System) in rebuilding 86 per cent the Hume Highway to modern engineering standards with four or more lanes, and improved truck technology, the truck transit time is now about 10 hours. The average payload is now over 22 tonnes. In the 34 years from 1970 to 2004, roads modal share of intercity freight has increased from about 50 per cent to 85 to 90 per cent.

6. The Draft Proposals of the Commission in its Draft Discussion report on National Competition Policy (p 185-6) that CoAG should drive reform in land freight are supported.

7. The Commission's interest in passenger transport as part of the current inquiry into National Competition Policy is appreciated and the Draft Proposal (p 192) that CoAG should drive reform in passenger transport is supported.

APPENDIX A CONTESTABLE LAND FREIGHT

This appendix is drawn from a supplementary submission to the Commission's inquiry into Energy Efficiency. As noted in a paper *Rail freight competition and efficiency gains in Australia* from pages 512-528 of the Proceedings of the 36th Canadian Transport Research Forum, Vancouver May 2001 (page 525): *"The major constraints to rail assuming more of Australia's land freight task is considered to be the severe speed weight restrictions imposed by the track linking Australia's three largest cities, and, lack of competitive neutrality."* Over-regulation and lack of harmonization between the States is a further constraint to rail winning more land freight.

Table A includes land freight tonnages as well as the rail and road freight tasks (in tonne kilometers) for 2002-03 in Australia are shown.

TABLE A AUSTRALIAN LAND FREIGHT TASKS 2002-03

	Millions tonnes	**Billion tonne kilometres**
Rail		
Coal	226	44.4
Ore	223	66.8
Grain (poor harvest)	13	5.1
All bulk	529	136
All non-bulk	16	22
Total rail freight	**545**	**158**
(*Interstate rail* `	*13.4*	*25.5)*
Road		
Light Comm. Vehicles	121	6.7
Rigid trucks	707	30.4
All articulated trucks	725	115.65
Total road freight	**1553**	**153**

References: For rail, the Australasian Railway Association (ARA) Australian Rail Industry Report 2003 For road. Australian Bureau of Statistics Survey of Motor Vehicle Usage 9208.0 for 12 months ending 31 Oct 2003.

In 2002-03, the Australian rail freight task was just over 158 billion tonne kilometres (btkm). Most, but not all, of the bulk rail freight task (136 btkm) is captive to rail, For the rail freight task, up to say 8 btkm (including say 4 btkm intermodal interstate) is regarded as being subject to transfer from rail to road. This could occur:

A. with the further (conditional) relaxation of mass limits for heavy trucks proposed under under the National Transport Commission (NTC) third generation charges due for 2006;
B. the new NTC charges are not appreciably increased for heavier long distance trucks (including six axle articulated trucks with a GVM of 42.5 tonnes and B-Doubles);
C. if international oil prices return to lower levels;
D. with extensive abandonment of grain lines in NSW, Vic, SA and WA; and,
E. if the AusLink White Paper proposed investments for rail to 2009 are not increased for rail. This is to compensate for the present omission of rail funds for the Brisbane - Cairns corridor and the reallocation shortly before the 2003 Federal election of $75 million per year of regional transport funds (some of which could have been used to upgrade rail) to local Councils (which was apparently designated for road works).

The road freight task includes over 45 btkm for freight movements in smaller vehicles (LCVs, rigid and artic. trucks under 40 tonnes) which may be regarded as captive to road. At least 7 btkm of line haul interstate road freight, and a further 5 btkm of intrastate road freight is regarded as being subject to potential transfer to rail if:

A. the NTC charges for heavier trucks were replaced by mass distance charges at a level to ensure competitive neutrality (at least in Australia's populous zone);
B. there was better regulation of the road freight industry;
C. there was recovery of most of the significant external costs from road freight;
D. if international oil prices continue to increase;
E. interstate mainline rail track infrastructure was upgraded to improve the speed - weight performance of freight trains with some 250 to 350 km of track straightening;
F. an inland Melbourne - Parkes - Brisbane railway is developed; and,
F. some extensions are made to intrastate track.

Note that completion of the Alice Springs to Darwin railway (1420 km) with a transfer during 2004 of say 0.25m tonnes from road to rail lead to a shift of only about 0.36 btkm.

It is of interest that Mr Tony Friedlander, CEO of the New Zealand Road Transport Forum in giving a paper at the Towards Sustainable Land Transport Conference at Wellington NZ on 24 November 2004 considered that at most 10 per cent and more likely 5 per cent of land freight in New Zealand is contestable between road and rail.

APPENDIX B SYDNEY MELBOURNE RAIL

The following 25 reports since 1980 deal fully, or in part, with Sydney - Melbourne rail track upgrading. They exclude numerous studies for Very Fast Trains going back to the CSIRO proposal in 1984.

1980 Federal electrification paper and offer to assist NSW and Victoria to finance electrification of the Sydney - Melbourne railway
1981 Bicentennial High Speed Rail Proposal of the Institution of Engineers, Australia
1988 V/Line Fast Freight Train (FFT) Proposal
1988 State Rail study re Main South Line: Reduced Transit Times
1989 High Speed Rail Engineers (HSRE) Fast Freight Train

1989 McLennan Magasanik Market Feasibility study for the FFT
1990 State Rail study re Curve Straightening on Main South
1991 National Rail Freight Initiative (NRFI)
1991 Jacana Study
1993 Energy R and D Corporation project report

1993 BTCE An economic evaluation of the Sydney - Melbourne transport corridor
1994 NRC Railway Infrastructure Plan
1994 Examination of the ‘Wentworth Route’ for State Rail
1995 BTCE Report for the NTPT
1995 Sydney - Canberra Rail Corridor: Infrastructure Study (for SRA and NSW DOT)

1995 Bureau of Industry Economics, International Benchmarking, Rail Freight 1995
1998 Maunsell report on Operational Standards
1998 Neville Committee inquiry and report
1988 NSW Public Works Committee inquiry into tilt trains
1998 Booz Allen and Hamilton, report re interstate rail track capital program

2000 Project 11 report for Rail Access Corporation and others
2001 Australian Rail Track Corporation Track Audit
2003 Railway Technical Society of Australasia Fast freight and passenger trains (see rtsa.com.au then publications/submissions)
2004 AusLink White Paper
2004 Internal NSW RIC and ARTC reports

Reference Updated from page 102 *Back on Track: Rethinking transport policy in Australia and New Zealand* by Laird, Newman, Bachels and Kenworthy 2001 UNSW Press. See also 2002 *Sydney–Canberra–Melbourne High Speed Train Options*, Australasian Transport Research Forum (ATRF), Canberra, Papers, Volume 25 (on BTRE website)

Most of these reports agree that some track straightening is needed. To quote the summary from *Interstate rail track upgrading options to 2014*, Laird and Michell, ATRF Adelaide Papers

> As part of the AusLink White Paper released in June 2004, extensive funding was announced for upgrading interstate mainline track. The main aims are to reduce the transit times, increase capacity and reduce track maintenance costs. However more work will be needed to remedy severe speed restrictions imposed by steep grades and tight curves on NSW track.
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> Particular attention is given to three proposed NSW rail deviations between Sydney and Melbourne. These deviations are between Glenlee and Aylmerton, Goulburn and Yass, and, Bowning and Cootamundra. All are designed to remove the impact of excessive curvature. The combined length of these deviations is 164 km and they would replace 219 km of track on “steam age” alignment. The benefits for a 'standard' intermodal freight train (two NR locomotives with a 2600 tonne trailing load) include a time saving of 84 minutes and a fuel saving of over 1000 litres of diesel. The regional benefits of track upgraded for faster and heavier freight trains may also include high-speed tilt passenger train services.
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> The paper estimates combined benefits from the three rail deviations of about $24 million per year from reductions in train operating costs and track maintenance costs, and the potential reduction in net external costs with Sydney - Melbourne inter- city land freight.

Further research examines the benefits of construction of 200 km of new track in five locations (the three major deviations plus two smaller ones: Werai - Penrose and Frampton - Bethungra) on the NSW Main South Line between Sydney and Melbourne to replace 260 km of steam age track. The benefits are substantial, including a real reduction of the transit time of a freight train by 1 ¾ hrs, saving over 1300 litres of fuel per 'standard' freight train, brake wear, and track maintenance.

Straightening out the Sydney - Junee railway should be seen in the context of:

A. Brisbane - Townsville: over 160 km of rail deviations built to modern standards since 1987 under Mainline Electrification (late 1980s) and Mainline Upgrade (1992-95), with duplication and deviations of Caboolture - Landsborough likely to follow soon.

B. Maitland - Brisbane: where the AusLink White Paper notes (p39) 121 km of rail deviations in five locations at an indicative cost of $158m.

C. Australia has invested more than $5 bn in todays terms since 1974 in rebuilding 86 per cent the Hume Highway to modern engineering standards plus road maintenance costs.

D. The ARTC Track Audit noted the volume of Sydney - Melbourne intermodal intercity line haul road freight by 2000 as 8.4 million tonnes, whilst the BTRE Info Sheet 22 *Freight between Australian cities* notes a projected 9.174 million tonnes in 2003-04 (with respective rail tonnages (excluding steel) as 1.0 and 0.97 million tonnes). By use of the unit external costs given in Appendix C and by use of assumptions including a road distance of 840 km, an upgraded rail distance of 920 km, urban hauls of 50 km for each line haul mode, plus an average 25 km urban road pick up and delivery for each rail line haul, there is an external cost of $14 for each tonne of road hauled intercity freight. This is against 90 cents per tonne for rail line haul and 95 cents for road pick up and delivery.

With these estimates of unit external costs, the total external for Sydney - Melbourne line haul road freight in 2003-04 was about $128 million. This includes $77m for unrecovered road system costs, $38.5m for road crash risk, and a very conservative $0.5 million for air pollution in urban areas (of Sydney and Melbourne).

E. Articulated trucks - interstate and intrastate - have been involved in Hume Highway accidents resulting in, on average, over 10 fatalities per year as per Table B. This represents about 36 per cent of fatalities involving all vehicles.

TABLE B FATALITIES FROM ROAD CRASHES ON THE HUME HIGHWAY IN THREE YEARS TO 31 DECEMBER 2002

	Articulated Trucks	All Vehicles
New South Wales	23	52
Victoria	8	33
Total	**31**	**85**

Reference: Data supplied by NSW Roads and Traffic Authority and the Vic Roads Road Crash Information System (RCIS)

F. If the Sydney Melbourne railway is not upgraded to a real 'fit for purpose' standard, more and more line haul freight will be going onto the Hume Highway. Under a business as usual projection, the BTRE (IS22) projects by 2013-14 Sydney - Melbourne intermodal intercity line haul road freight rising to 13.07m tonnes and rail falling to 0.856m tonnes.

G. Competitive freight trains need competitive tracks, and competitive neutrality with road transport in regards to access pricing and regulation.

APPENDIX C EXTERNAL COSTS

In brief, as noted by the former Inter-State Commission (*Road Use Charges and Vehicle Registration : A National Scheme*, 1990, p89), road external costs are *"...costs imposed outside market transactions and they fall on a number of individuals or groups - road users other than those individuals who give rise to the costs, individuals other than road users (such as those who live in proximity to roads), or society as a whole."* Such external costs may also be imposed by rail freight. Some estimates of external costs are given in Table C.

External costs were considered by the National Transport Planning Taskforce (NTPT - 1994, p53) that noted, inter alia *"...A pricing mechanism for road use, which relates use to cost of provision and external costs, such as congestion and environmental factors, needs to be developed. Similarly, pricing mechanisms linking use of port, airport and rail infrastructure to the costs of provision, are required."*

TABLE C REVISED (AND TRACK AUDIT) EXTERNALITY COSTS

Externality		**Road (c/ntk)**		**Rail (c/ntk)**	
		REVISED	**(TA)**	**REVISED**	**(TA)**
Noise pollution					
	Rural	0.003	(0.003)	-	-
	Metro	0.006	(0.006)	0.004	(0.04)
Air pollution	Rural	-	-	-	-
	Metro	0.11	(0.11)	0.03	(0.03)
Greenhouse gases					
	Rural	0.17	(0.16)	0.064	(0.01)
	Metro	0.20	(0.16)	0.064	(0.01)
Congestion costs	Rural	-	-	-	-
	Metro	0.09	(0.09)	-	-
Accident Costs		0.50	(0.32)	0.03	(0.03)
Increased road maintenance		1.00	(0.64)	-	-
TOTALS	**Rural**	**1.673**	**(1.123)**	**0.094**	**(0.04)**
	Metro	**1.906**	**(1.326)**	**0.128**	**(0.074)**

Reference: Queensland Transport (2003) *Rail Studies*, Land freight external costs in Queensland (note accident costs in Table C are for Australia and not Queensland), and Booz-Allen & Hamilton Appendix A, page 24, for Track Audit (TA) values (given in brackets).