Inquiry into Progress in Rail Reform

Submission to the Productivity Commission

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1. INTRODUCTION

This Draft Report is of interest, but could have gone further in a number of areas. Somem of the nine draft recommendations are in need of being more definite, and more recommendations would be appropriate.

The submissions made to the present inquiry by the Commission were similar to the submissions made to the House of Representatives Standing Committee on Communication, Transport, and Microeconomic Reform (HORSCCTMR) in their inquiry into rail. It is then a source of amazement that the draft report of the Commission is so different to the report 'Tracking Australia' (HORSCCTMR, 1998).

As shown by the weight of evidence presented to the HORSCCTMR by the 117 organisations and individuals who made submissions to the 1997-98 rail inquiry, and the Neville Committee's report, the most pressing issues facing rail in Australia is the condition of the mainline interstate track in Eastern Australia, and, competitive neutrality with road.

Yet, the issue of track quality seems only to rate a few pages in the Draft Report (page 29 where it was identified as an urgent issue before the 1991 rail inquiry of the Commission, page 49, re inadequate investment in rail infrastructure, page 51 re investment, and pages 197-198 re capital outlay and asset condition). This is despite the need for investment in mainline intercity rail track being addressed by the National Transport Planning Taskforce (NTPT) in 1994-95 as well as the Neville Committee. A key recommendation (No. 2) of the NTPT was **the need for a more balanced approach to road, rail, port and airport infrastructure investments** - the Neville Committee found this worth repeating and a clearer statement of support from the Commission for this approach (rec 9.1) would be helpful. It is also suggested that track quality rate a separate Chapter in the final report.

Most people would regard both the Queensland Rail 1992 - 97 Mainline Upgrade and the Commonwealth's 'One Nation' 1992 - 95 rail capital works program, with Adelaide - Melbourne gauge standardisation (that paved the way for Melbourne - Perth 'private' train operations) as essential parts of rail reform in the 1990s. Yet they are lacking from Chapter 3 on rail reform.

On the other hand, it is pleasing to see that the Commission has addressed the major discrepancy between Federal funding for road and rail track funding, and, that of rail track access pricing for freight trains, and road pricing for heavy articulated trucks. The Commission's proposal for a separate inquiry into road provision, funding and pricing is

supported, but until road pricing reforms can be implemented, there will be an urgent need for Government investment in intercity rail track.

2. MEASURES NEEDING MORE ATTENTION

2.1 Recognition of the findings and recommendations of the House of Representatives Standing Committee on Communication, Transport, and Microeconomic Reform.

A quick scan of the Draft Report shows about 7 references to 'Tracking Australia' including on page 3 (there was an inquiry and it was of 'valuable assistance'), page 17 (public sector investment in rail) page 52 (an extra $750 million over three years to address the worst track deficiencies ...), page 153 (posted prices by track segment) page 158 (ARTC not to own NSW and WA sections of track) page 187 (re regulatory reform) and page 208 (re diesel excise). More references to the findings and recommendations of 'Tracking Australia' would have been appropriate.

It is of note that the report of the Senate Environment, Communications, Information Technology and the Arts References Committee 'Inquiry into the GST and a New Tax System' released 29th March 1999 included as an Appendix (Appendix 2, pages 151 to 160) a copy of the **executive summary and the recommendations** of the Neville Committee. The Draft Report did not. Perhaps the Final Report should.

2.2 Progress in rail since the 1991 rail report

The progress made by the rail systems in improving rail freight efficiency and competitiveness in Australia, and the progress in elimination of overall rail freight deficits, in a less than friendly Government policy environment, could have been given more emphasis. In addition, the useful role of rail in urban public transport deserves more consideration.

The relative success of Tranz Rail (ex New Zealand Railways that was privatised in 1993), albeit in a much different policy environment to Australia, that now pays dividends to shareholders and taxes to Government, is also of note.

2.3 Data Deficiencies

The Draft Report mentions problems with transport data, starting with the pleasant understatement on page 8 ***'There are currently limitations on the quality of transport data in Australia ...'*** This is with special reference to freight output from the road freight industry, then other references including on page 17, where it is unclear as to the extent of private sector investment in rail [also public outlays is not always clear], then on page 19, employment estimates from an ABS source are not comparable with other data sources, on pages 23 and 28, problems on profitability and costs of coal operations in Queensland and NSW (an area with increasing heat and little light), on pages 56 and 58, a problem with

availability, quality, consistency and disaggragation of rail data from Australia and overseas, and, in Appendix D, a constraint on choice of variables because of data limitations over a period of years, with energy excluded from input measures on page D8.

More shall be said on energy later. Meantime, as per my primary submission to the Commission: There are real problems with transport data, and if the Commission notes in the course of its inquiry some problems with ***the quality and quantity*** of transport data, consideration of a recommendation for **more and better data on freight and passenger movements that is accurate, up to date, and published quickly** would be much appreciated. To quote from an editorial from Rail Digest, December 1997:*"Both road and rail would benefit from more and better data on freight and passenger movements. Such data needs to be accurate, up to date, and published quickly. Transport data is an important area where the Australian Bureau of Statistics is struggling with other demands on its resources (it ceased its publication Rail Transport years ago and more recently its Interstate Freight Statistics). Other Government agencies analysing land transport data have either gone (the Inter-State Commission 1990, the Bureau of Industry Economics in 1996; and now the Energy Research and Development Corporation) or, been down sized (Bureau of Transport and Communications Economics in 1996, and now our Universities)."*

As per submissions to the Neville Committee: One of many examples of the need for better rail data is shown by two significant errors in rail data that appear on page 532 the *Australian Year Book 1997* that was published by the Australian Bureau of Statistics.
Re Table 22.16 Government Railways: Freight Net T-KM

The 1993-94 and 1994-95 data was in error as the net tonne-km for National Rail have effectively been double counted (over the other systems). The correct data was given by the Steering Committee on National Performance Monitoring of Government Trading Enterprises in May 1997.

As well, the Australian Year Book for 1997 in Table 22.17 appears to have erred on the low side for non-Government rail for 1995-96 tonne-kms, and this could be due to counting three quarters, and not four quarters, of BTCE data. Here, the BTCE Indicators September 1997 Quarter gives data for Private Rail Tonnages, amounting to 183.581 million tonnes, whereas the ABS figure is 146.0 million tonnes, which is the figure one gets on adding the BTCE Sept 95, Dec 95 and March 96 quarters together.

The ABS did the record straight in the 1998 Year Book, and ABS have indicated, by way of letter, a new check on rail data. However, the Commission may share a concern of whether there is a robust mechanism in place to ensure full and accurate reporting of <u>all</u> rail freight data - both tonnages and tonne-kilometres - and Government and non-Government, as Government systems fragment, and are privatised.

It is a good question, as to whether SCT, TNT (now Toll) and Patricks 'private' train tonnage/tonne kms have been counted in the past. If so, are they are included in the

Annual Reports of the various non NR rail systems ? How will they be counted in the future ?

Since these submissions were made, the situation for land transport data appears to have gone further backwards, as follows.

a. The Steering Committee on National Performance Monitoring of Government Business Enterprises (SCNPMGBE) up to 1998 has performed a valuable service in publishing non-financial as well as financial data. However, the 1998 report was the last one. **This is a major weakness and it would be good to see this Committee reinstated, and publishing non-financial as well as financial data.**

b. National Rail did not publish freight outputs (in tonne kms) in its 1997-98 Annual Report, although it did have them in its 1996-97 Annual Report.

c. Both FrieghtCorp (NSW) and V/Line did not publish freight outputs in their 1997-98 and 1996-97 Annual Reports.

Could the Commission obtain the missing net tkms for 1997-98 ?

The data for road freight is worse, with problems in the 1995 ABS Survey of Motor Vehicle Usage leading to non-publication of a final version.

It is suggested that a quantum increase in resources needs to be made available to transportation data collection and analysis in Australia, and, that these resources should be provided by the Commonwealth. The United States Bureau of Transportation Statistics (BTS) is a good model. This was established as a result of the United States Intermodal Surface Transportation Efficiency Act 1991 that sets out to mandate responsible intermodal planning in such a way to *"...reduce energy consumption and air pollution while promoting economic development"*. Funding for the BTS was continued in the Transportation Equity Act signed into law by President Clinton in 1998.

So, again, consideration **by the Commission** of a recommendation for **more and better data on freight and passenger movements that is accurate, up to date, and published quickly** would be much appreciated. So also would **Commission support for reinstating the Steering Committee on National Performance Monitoring of Government Business Enterprises with annual reports complete with non-financial data.**

2.4 Average Australian rail freight rates

Page 67 notes that real national freight rates have declined to 4.2 cents per net tonne km in 1996-97 from 5.2 cents in 1998-90 (in real terms) It would appear that this is for the Government systems in Australia; if so, it may be worth emphasising this on this page. The view that lifting of 'all remaining restrictions' on road that has been the driving force for lower freight that is made out on page 67 of the Draft Report is not convincing, as most, but not all restrictions on road haulage had been lifted by 1989. Other major driving forces for lower rail freight rates have been the significant increase in rail freight

productivity, investment in new locomotives and wagons, and some rail- rail competition with the prospect of open access for coal and mineral traffic.

The movement of iron ore in the worlds most efficient freight trains over modern well aligned and maintained track with high axle loadings was (as noted in my primary submission) to be less than one cent per net tonne kilometre. If we assume the 41 btkm freight task was performed at one cent per net tonne kilometre and blend this in with the Government operations (68 btkm), plus other private operations in 1996-97 (1 btkm), sub total about 69 btkm at 4.2 cents per net tonne km, the Australian average is about 3.0 cents per net tonne km. Given the difficulties faces by the Government rail freight operators in the non - coal task (about 38 btkm in 1996-97) with relatively 'thin' markets and too much sub-standard infrastructure (let alone the additional costs imposed by the application of current NCP), an Australian average of about 3.0 cents compares favourably with the cited rates in America of 2.7 cents per ntkm in Canada and 2.4 cents per ntkm in the USA.

2.5 Energy use

The report should be saying more about energy use, which is mainly restricted to Appendix D where on page D8, it is noted that energy (with contracted out services) *"...was excluded from the input measures of the models because of a lack of reliable data",* and *"...data on total energy expenditure are available but cannot be disaggregated into freight, non-urban passenger and urban passenger expenditure.""*

This statement is hard to accept, given the public record, and the results of my own inquiries to Government rail systems, who, until recently, were quite happy to supply such data, and split into freight and passengers, with Queensland Rail and Westrail having supplied it up to 30 June 1998. Indeed, Westrail had energy data in its Annual Reports until recently - a commendable practice that the Commission could do well to encourage.

The public record, as brought specifically to the attention of the Commission in its inquiry, by way of letter dated 1 September 1998 as follows. **"Please also find enclosed a copy of a recent article of this writer "Rail freight efficiency and competitiveness in Australia", from Transport Reviews, Taylor and Francis, London, Vol 18, No 3, p241 - 256."**

This paper, which was not cited, was also apparently not read, for Table 4, on page 246, specifically lists rail freight fuel use. This Table follows, as does related comment, in Section 3 Energy use and efficiency from the paper.

3. Energy use and efficiency

Table 4 Rail freight fuel use by system and year

Rail System	Fuel Use in Rail Freight Operations (Million Litres)						
	1979-80	89-90	90-91	91-92	92-93	93-94	94-95
QR	157	94.2	86.3	80.1	78.8	81.2	84
SRA	196	194.4	167.5	149.4	158.3	174.9	156

V/Line67	40.3	46.9	43.3	45.5	48.7	45	
Westrail	58	48.7	44.1	44.1	43.8	47.1	50
AN	93	86.1	86.7	85.8	85.7	88.3	85
Total Freight	571	463.7	431.5	402.7	412.1	440.2	420

Reference: For 1979-80, Australian Railway Research and Development Organisation (1981, p11). From 1989, based on advice from rail systems, with recent rail freight fuel use for V/Line and AN estimated on the basis of estimates of gross tonne km for freight and passenger trains. Note that this broad assumption may overstate rail freight fuel use.

Table 5 Rail freight primary energy efficiency by system and year

Rail System	Net tonne km per MJ					
	1979-80	1990-91	1991-92	1992-93	1993-94	1994-95
QR	1.75	2.81	2.97	2.95	2.92	2.94
SRA	na	1.51	1.55	1.62	1.63	1.96
V/Line 1.39		1.891.80	1.94	2.07	2.31	
Westrail	1.95	2.49	2.65	2.72	2.77	2.99
AN	1.45	2.15	2.18	2.37	2.48	2.60
All systems	na	2.13	2.22	2.28	2.29	2.53

Reference: Based on Table 1 (modified to distribute the NR task to the other systems) and Table 4 with 1 litre of diesel equivalent to 41.77 MJ and for electricity use in Queensland and NSW from 1990-91, 1 kWh = 10.54 MJ in NSW and 1 kWh = 10.92 MJ in Qld (Apelbaum, 1993), electricity use for QR freight trains from 1990-91 advised by QR, and estimated for NSW from overall SRA electricity use. Electric traction for freight was limited in NSW in 1979-80 and introduced in Queensland in 1986.

A further indication of increased efficiency in rail freight is the reduction in energy inputs for a given freight task - either diesel or electricity. Diesel use for rail freight operations by each system to 1994-95 is given in Table 4. The resulting average energy efficiency is given for each system to 1994-95 in Table 5, after an adjustment has been made for use of electric traction in freight operations in Queensland and NSW.

Whilst each system is generally showing increasing energy efficiency, no system has achieved the average energy efficiency of all United States Class I railroads, which steadily increased each year from 235 to 320 revenue ton miles per US gallon of fuel consumed from 1980 to 1989 (Association of American Railroads, 1990). This translates to 2.18 to 2.95 net tonne km per MJ of primary energy. Thus, the better performing Government system in Australia (Queensland Rail, and Westrail) in terms of energy efficiency, had achieved in 1993 an average energy efficiency equal to the aggregate energy efficiency of all US Class One Railroads in 1989.

The average energy efficiency of BHP iron ore trains in the Pilbara was noted as about 10 net tonne km per MJ in 1991 (Laird and Adorni-Braccesi, 1993), and is understood to have since attained 12 net tonne per MJ. The energy efficiency of the Pilbara iron ore rail freight operations are considered to be the best in the world.

The BIE (1995, p97) gives a discussion on fuel use by freight trains, noting inter alia, a variation from just over 3 litres per thousand gross tonne km (L/000 gtk)"... *for*

4000 tonne freight trains hauled by modern locomotives, to over 10 L/000 gtk (for trains crossing the Great Divide" (eg. Sydney Melbourne). A similar ratio (with 4.2 L/000 gtk for Adelaide - Perth and 10.2 L/000 gtk) was noted by Railways of Australia (1980). Fuel use in freight train operations in Australia was also examined by Quarterman (BTE, 1981) who, like the BIE (1995), noted energy efficiency increasing with train mass.

However, whereas the BIE (1995, p97) considered that *"...Terrain is the major physical influence on fuel consumption"*, Quarterman (BTE, 1981, p xii) noted that *"... The disparity between the efficiencies of different parts of the railway system suggests that there is also considerable potential for lifting the maximum attainable efficiency of some railways by improvements to grading and alignment ..."*.

Whilst terrain does affect fuel use, the extent to which fuel use is affected is critically dependent on track alignment. One striking example as shown by computer simulation (Laird and Adorni-Braccesi, 1993) was for freight trains with two 2240 kW locomotives hauling a 1600 trailing tonne load, a 19th Century alignment between Goulburn and Yass would have been 12 per cent quicker and about 12 per cent more energy efficient than the present alignment that in the 1910's replaced the older alignment: also, if the present track was to be replaced by a new alignment built to modern standards, savings of about 25 per cent in both transit time and fuel use would result.

A further computer simulation was to compare, on the one hand the existing mainline interstate track south of Sydney (Glenlee - Albury): some 586 km in distance with a maximum altitude of 730 m) with steep ruling grades (1 in 40) and excessive curvature; and on the other hand, theoretical new track with a ruling grade of 1 in 80 passing through existing main stations, ridge crossings and river crossings. For the above train (two 2240 kW locos and a 1600t load) the existing track required a time of about 7.5 hours and used fuel at a rate of about 6.9 litres per thousand trailing tonne km (L/000 ttkm). However, the transit time for the same train running over the theoretical new track was about 6 hours and fuel use was down to 5.7 L/000 ttkm. With an increase in trailing load to 4800 tonnes, and three locomotives, the time would increase to nearly 7 hours and fuel use would be down to 4.1 L/000 ttkm. This compares favourable with the same train running over the well aligned Adelaide - Kalgoorlie track using 3.6 L/000 ttkm, and clearly demonstrates that the effects of difficult terrain on rail freight energy efficiency can be mitigated with well aligned rail track.

The cost of energy to the Government rail systems was noted by the BTCE (1995a) and in the four years to 1993-94 was an average of $341 per annum. The imposition of fuel excise as of August 1982 on the rail systems has an appreciable impact on rail finances. The Industry Commission (1991,1994) has consistently argued that the Government rail systems should receive a full exemption for excise paid on their use of diesel fuel. A similar recommendation was made by the former Inter-State Commission (1990). As of February 1997, this excise rate was 34.697 cents per litre and it is estimated that for 1995-96, the Government rail systems will have paid about $140 million in fuel excise for freight operations. This is about 5 per cent of an estimated $2.8 billion rail freight revenue in 1995-96 (SCNPM, 1997).

Queensland Rail was able to achieve a 5 per cent increase in energy efficiency in the transition from diesel electric locomotives to 25 000 volt AC electric locomotives for Central Queensland coal train operations (Laird and Adorni-Braccesi, 1993). This

transition also reduced diesel consumption by about 128 million litres a year, with appreciably reduced locomotive maintenance costs (Read and Drake, 1989). At the above cited excise rate, this reduced fuel use represents a saving of $45 million per year to the Queensland Government.

Whilst not as yet on the public record, the information supplied by the rail systems to compile Table 4 also included comment on energy use in passenger operations. This information is available on request. As well, this writer is not the only one to have addressed these questions, as shown by **The Apelbaum Consulting Group (1997), <u>The Australian Transport Task, Energy Consumed and Greenhouse Gas Emissions</u>, Vol B - report** The report is freely availably and is not cited in the Draft Report. **It is suggested that energy use by rail systems is important, and deserves more attention in the Final Report.**

2.6 Rail transport, environment and greenhouse

The report has little, if any, comment about the value of rail in reducing transport greenhouse gas emissions in freight transport (although greenhouse is mentioned on page 209). The wider environmental benefits of rail appear to be very quickly dealt with in Chapter 10. This is despite the interest shown by the Industry Commission in its two 1991 reports *Rail Transport* and *Costs and Benefits of Reducing Greenhouse Gas Emissions,* and the Bureau of Transport and Communications Economics 1996 report *Transport and Greenhouse Costs and options for reducing emissions.*

The Productivity Commission's concurrent inquiry into ESD also suggests that there is scope for more environmental considerations in the present rail inquiry.

The Commission's attention is again invited to the 1991 report of the Senate Standing Committee on Industry Science and Technology <u>'Rescue the future - reducing the impact of the greenhouse effect'</u> that notes, inter alia, in regards to rail (p78) *"...it is essential that greater emphasis be given to improving the interstate rail system ..."* and found *"...considerable evidence that much could be done to improve the rail system, both in terms of energy use and overall efficiency, if sufficient attention is paid to grades, curves and track standards."*

This Senate Committee also found that an efficient rail system could result in *"...significant reductions in carbon dioxide emissions and large savings in Australian consumption of liquid fuels for transport services."*

After noting many reports canvassing the need for change, and then recent Government initiatives, the Committee urged that further action be taken to significantly improve the rail system. The Committee also held (p79) *"...an effective public transport system is essential to any strategy to reduce transport sector carbon dioxide."*

In summary, an upgraded rail system - both for freight and urban passengers - would make a useful contribution to reducing Australian transport related greenhouse gas

emissions. Perhaps Chapter 10 should be expanded to include more on environmental benefits and greenhouse, also, it could be called Social and Environmental Dimensions.

2.7 The Queensland Government Mainline Upgrade (MLU)

The Draft Report appears to mention MLU only once, and in a negative context on page 71 when it talks about a deterioration in QR's service in 1994-95 ... This, in my view at best reflects a total lack of understanding of the costs and benefits of MLU. As well, MLU was an essential part of rail reform in the 1990s, and deserves a mention in Chapter 3 on rail reform.

MLU was a five year $590 million Mainline Upgrade Project (MLU) completed in 1997 that includesd 120 km of high quality rail deviations with easy grades and curves between Brisbane and Cairns. The combined result of MLU track works has been to:

* Increase axle loadings;
* Increase the trailing load behind a locomotive (from 760 tonnes to 1200 tonnes with Mainline Electrification (MLE) in the 1980s, then to 1500 tonnes with MLU); and,
* reduce transit times for both freight and passenger trains (with Brisbane - Rockhampton tilt trains due in Oct.1998). Some data on the track alignment is given by Laird (1998,Table 8).

The main work in MLU from 1992 to 1997 along with the acquisition of 250 new container wagons in 1995 and 40 new generation 2380 kW locomotives, has been rail deviations and the upgrading of hundreds of bridges for heavier axle loads.

QR is clearly gaining benefits from MLU in the form of faster and heavier freight trains. One benefit was a partnership with National Rail from July 1997, was provision of a premium Melbourne - Townsville freight train. Another was regional employment.

A further gain, was the start of tilt train services on 6 November 1998, between Brisbane and Rockhampton. These services have been well received.

2.8 Overseas examples

The Draft Report has used United States and Canadian Class I railways to 'benchmark' Australian government freight railways, as did the BIE in 1995. It is again relevant that these railways have some wagons carrying grain, coal, or steel with a gross weight of 268,000 lb (about 30 tonne axle loading) at speeds of up to 100 km per hour. In Eastern Australia (with the exception of the Hunter Valley), grain and steel trains are limited to 25 tonne axle loads at 80 km per hour.

The United States and Canadian Class I railways have made investments in track, rolling stock, and locomotives to achieve these results. Only in the Pilbara do we see rail systems with extensive high quality track, wagons and locomotives supporting the really heavy operations, with the result that they are the most efficient railways in the world. [It is considered that the Hunter Valley coal operations are in need of further track investment

(such as easing the ruling grades for loaded coal trains on Whittingham Bank east of Singleton) to bring them to world class].

My primary submission also noted New Zealand's North Island Main Trunk (NIMT) line linking Wellington and Auckland was extensively upgraded in the 1970s and 1980s to give an improved alignment with higher clearances. This is similar to the Queensland MLE and MLU projects, and typical of the track investment needed to boost intercity rail efficiency.

2.9 Note re track upgrading

The Commonwealth has played a role in the past in mainline rail track upgrading, and has a ongoing role to play. Unlike the Canadian, New Zealand and Queensland Governments, the Commonwealth and other State Governments lost valuable time during the 1980s and the 1990s in mainline rail track upgrading.

There is also a limit to the gains than from competition policy. As seen by Kain (1995), *"...rail is probably fast reaching the point where the scope for marginal productivity improvements from operational (eg. work practice) reforms may be limited. Future significant gains in productivity will rely increasingly on effective track investment initiatives."*

Track quality should rate a separate chapter/section in the final report.

2.10 Performance of rail

Chapter 4 looks at the performance of rail. However, the discussion here re considerable variation in the performance of interstate rail freight between various corridors is deferred to Chapter 9, and then it is only brief. It would appear, from modal shares etc, and evidence presented, that the Adelaide - Perth corridor generally performs well whilst the Adelaide - Melbourne - Sydney - Brisbane corridors are currently poor.

The relationship between higher rail efficiencies, lower unit costs and higher modal shares for rail was noted by the National Transport Planning Taskforce (NTPT, 1995, p11) in a comparison between the Melbourne - Brisbane and Adelaide - Perth corridors.

It is suggested that the Final Report should have more comment 'up front' about the **physical limitations on rail performance** imposed by poor track infrastructure

3. OTHER ISSUES

3.1 The need for intercity track upgrading

As noted in earlier submissions, over the last twenty years, there has been no shortage of reports for the need for rail track upgrading. **In order to achieve the short term five year goal of the Australian Transport Council of having intermodal interstate trains reach an average speed of 80 kilometres per hour, some track**

upgrading is necessary. This may include improvements to the worst aligned track in the Adelaide Hills, and in NSW, will be needed to reach this basic goal. In order to reach the longer term goal of having these trains reach an average speed of 100 kilometres per hour, some major deviations close to the existing line, built to at least basic Fast Freight Train (FFT) standards, but preferably Queensland Rail Mainline Upgrade standards, will be required.

The need for some track realignment was recognised by the studies done for the NTPT (1995) in order to reach two competitive goals. The first was to improve reliability and transit times, and to reduce interstate full rail freight unit costs down to 3 cents per net tonne km (tkm) over a few years (i.e. including track maintenance costs as well as train operational costs). The second competitive goal was to further reduce these costs to 2 cents per net tonne km at a total cost of about $3 billion. This includes about $1 billion for the Sydney Melbourne corridor, and another $1 billion for the Sydney Brisbane corridor.

The Adelaide - Melbourne standard gauge track has some sections in Victoria with old, worn out wooden sleepers and it is pleasing to now see that concrete sleepers that have been sitting by the track from 1995 to 1999 are finally being inserted with the support of the Victorian and Commonwealth Governments via the Australian Rail Track Corporation. It is also pleasing to see standard gauge rail rectification under way in Victoria, and, construction of the Parkes triangle in NSW. However, the denial of such basic infrastructure maintenance and enhancement for so long is an indictment on vertical disaggregation of rail systems. If one tenth of the effort, and expense, that had gone into disaggregation of rail systems had instead gone into track upgrading, these items would have been fixed long ago, with corresponding improvements to safe working systems.

As before, mainline intercity track realignment projects that need progressing in Australia include:

1. Caboolture - Landsborough (Qld),
2. Sydney - Hunter Valley (Short North),
3. Maitland - Brisbane,
4. A major Menangle - Mittagong deviation,
5. Mittagong - Albury - isolated sections, and,
6. Murray Bridge - Mt. Lofty, and,
7. Waterfall - Thirroul.

Progress towards some of these items was reported by the NSW Government in a December 1998 statement 'Action for Transport 2010'. Here, the issue of Short North rail upgrading achieved a new prominence following the announcement by the Premier, the Hon Bob Carr, MP in December 1998 that this corridor to Warnervale, will be upgraded as part of a $4 billion transport upgrade package. Ongoing speculation (eg. Newcastle Herald, on 29 September 1998) of an international airport at Kooragang Island, with a

very fast train link, is also of note. The proposal for a direct line between Fassifern and Hexham has also been noted by the above statement of the NSW Premier.

The November 1998 report of the NSW Public Works Committee inquiry into tilt trains is of interest. It gives particular emphasis to the NSW interstate mainlines. It refrains from commenting on the present Speedrail proposal and accepts the view that **the use of tilt trains without a track upgrade would not be appropriate.** In regards to Sydney - Melbourne, NSW Public Works Committee recommendations include:

That the NSW sections of the Sydney - Melbourne and Sydney - Brisbane railway line should be aerial-surveyed, mapped, and computer formated to improve knowledge of existing track alignments and to allow for proper planning of track deviations .

A full Cost Benefit Analysis (CBA) of upgrading the Sydney - Melbourne and Sydney - Brisbane corridors to Fast Freight Train standards (a minimum curve radii of 800 metres specified should be increased) *...and clearance for double-stacked containers).*

Various factors should be assessed in the CBA, including modern high voltage electrification, *and the CBA should use two methodologies*
commercial rates of return only, and,
a full assessment of [all relevant factors]
The Committee considers that the BTCE (now Bureau of Transport Economics) should be commissioned with this task by the NSW Minister for Roads and Minister for Transport.

The Draft report did not refer to either the November 1998 report of the NSW Public Works Committee inquiry into tilt trains and the December 1998 statement 'Action for Transport 2010' (at least, they are not in the references). Perhaps they should be in the Final Report.

3.2 Relative intercity road and rail track funding

The Draft Report on page 196 states that on Dept of Finance and Administration data, *Commonwealth funding of roads over the last 20 years has been about eight times the level of Commonwealth funding of rail. From 1977-78 to 1996-97, the Commonwealth spent $3.9 billion (in 1996-97 prices) on Commonwealth rail entities and infrastructure. Over the same period, Commonwealth funding of roads was $31.5 billion (sub.65)'*

However, as this submission (which was this Dept's one to the Neville Committee) points out, as did 'Tracking Australia' on page 111, that Commonwealth direct investment in new fixed rail assets somce 1980-81 was $1.19 billion. It is also clear, from a supplementary submission of this Dept to the Neville Committee that most of the $3.86 billion was for Australian National. Of this Australian National outlay, most would have been for revenue supplements up to 1990. Thus, the ratio of road to rail track upgrading is appreciably higher than the factor of eight quoted by the Commission.

A better comparison is provided by Commonwealth outlays on the National Highway System (NHS), and now the Pacific Highway as one of several Roads of National Importance. The NHS has been much upgraded since its inception in 1974, with

an estimated outlay since then to 30 June 1999 of **$17.89 billion** in 1999 terms. The net outlay on interstate mainline track is appreciably less, with a ratio of at least ten to one.

For the Sydney - Melbourne corridor, the ratio is more like one hundred to one, as noted by this writer in 1994 ('Rail and urban public transport: Commonwealth funding and policy issues', Research Paper No.12, 1994, Parliamentary Library) when the total amount expended on Hume Highway construction by the Federal Government to 30 June 1994 was approximately $2.7 billion in todays terms, and, the net Commonwealth expenditure on the Sydney - Melbourne railway since 1974 was estimated to be less than $30 million.

A reworking of Commonwealth outlays on the Hume Highway shows that from 1974 to 30 June 1999, for construction and some maintenance of about **$3.9 billion** in 1999 terms. In the last four years from 1995 to 1999, there has been no Commonwealth outlay on the Sydney - Melbourne railway (save for the possible start of some work on Melbourne - Albury), but interest and loan repayments in the order $1 million of have been made to the Commonwealth for earlier rail works.

The ratio of Commonwealth net outlays over the last 25 years for the Hume Highway and the Sydney - Melbourne rail track is then about 130 to one.

3.3 Funding for intercity rail track upgrading

The HORSC CTMR (1998) favoured a total of $1 billion of **Commonwealth** funding for interstate rail upgrading over the next three years, to be followed by $2 billion from 2001. The Smorgon report as quoted by the AFR on April 15 suggested $250 million over two years to December 2000, and to commit a further $470 million in upgrade funds. The issue should be properly addressed by the Commission in the final report.

As before, with the present high levels of "highway subsidisation", an expectation of private funding of intercity lines at 'no net cost to the taxpayer' is probably unrealistic.

If Australia is to wait until road system pricing is put on a commercial basis, it runs the risk of losing some intercity rail freight services. This is because a failure to remedy 'chronic deficiencies' in the interstate rail track, in the face of ongoing road upgrading and heavier trucks, will as recognised by the Neville Committee, put some rail services as risk. The most likely traffic to transfer is Melbourne - Sydney - Brisbane intercity rail freight plus some liquid fuel (eg. Sydney - Canberra petrol deliveries). The Commission may note that the Maitland - Brisbane line was put at risk by a Booz Allan and Hamilton report in 1989, also the NTPT (1995, p 63) BTCE report notes for Sydney - Brisbane rail that *"Transit times, reliability and costs are so poor that the corridor may not survive as a commercial freight alternative unless improvements are implemented."* This situation would be exacerbated by large scale upgrading of the Pacific Highway without rail track upgrading.

The ways public funding of track upgrading could be provided include:

A. Use of the full Federal fuel excise paid by the Government rail systems - this was some $160 million a year on the recent use of some 480 million litres a year of diesel - the Smorgon report as quoted by the AFR on April 15 put the amount at $165 million a year - what is it ? - **Could the Commission obtain the actual amount for 1997-98 ?**

B. Fund ongoing rail upgrading based on a 18 cents a litre of the fuel excise paid by the rail systems which is the level officially determined by the National Road Transport Commission (NRTC, 1992) as a partial road user charge for the use of heavy trucks.

C. Allocate some proceeds from the proposed sale of National Rail.

D. Use more State Government funding - needs some Commonwealth incentives.

3.4 The cost of not upgrading intercity rail track

Line haul road transport should be recognised as a high cost option for Australia (as seen by Robert Gottliebson, BRW, March 22±, 1999). It involves the use of an additional 100 million of litres or so of diesel fuel a year, plus the lives lost in fatal crashes involving articulated trucks on intercity highways (including 438 from the 9 years from 1988 to 31 December 1996 on NSW highways alone, which is about 38 per cent of fatalities from all road crashes on these highways - see primary submission). The cost of all road crashes involving articulated trucks for Sydney - Melbourne was noted at 0.2 cents per net tonne km by the Bureau of Transport and Communications Economics (1996, p212) *Transport and Greenhouse Costs and options for reducing emissions.* Line haul road transport also requires higher construction and maintenance costs for the National Highway System.

The Industry Commission (1991 Rail Transport p115,116) also had a good discussion on the cost to the States and local Government of road freight displacing some rail freight. This discussion was not so apparent in the 1999 Draft Report, although mention is made (page 217) that current road pricing does not give sufficient weight to various externalities.

3.5 Residual gauge standardisation

Residual gauge standardisation in Victoria is worth addressing, with the prospect of standard gauge access to the port of Geelong raised when the sale of V/Line Freight to private interests was announced. There is scope for further gauge standardisation in Victoria, and the present arrangements in Victoria are another factor in pushing up rail operating costs in Australia.

Adelaide - Melbourne gauge standardisation (that paved the way for Melbourne - Perth 'private' train operations) was an essential part of rail reform in the 1990s.

3.6 Double stacked containers ?

The February 1998 Maunsell report suggested that over the next twelve months, the options for a Brisbane-Melbourne route for double stacked containers be examined. This, along with the question of Adelaide-Melbourne clearances is worth addressing.

3.7 Urban public transport

Urban public transport is raised on pages 13 and 14, and in Chapter 10. The value of past Federal Government programs for urban public transport with current road pricing in our major cities, could receive more attention.

3.8 What is the cost of disaggregation of rail systems in Australia ?

The recognition of " heavy transaction costs..." of separation on page 97 is appreciated, as is the relevance of size of operation. However, at the end of the day, the main questions are: **Have the new arrangements assisted rail to win a larger share of the nation's land freight task ? Or to invest in more productive infrastructure, or show a reasonable rate of return on assets ?** The answers to each question could well be negative.

Thus, one could argue that there has now been more than enough separation of rail entities in Australia, and, it is about time to give rail - both the public and private sectors - a 'fair go' with the chance to make a reasonable return on traffics to which it is well suited. It could also be argued that there is enough private sector ownership of railways, and further major asset sales could be deferred pending the improvement of road pricing etc when the assets would realize a better price, and could attract more Australian investment.

4 COMPETITIVE NEUTRALITY

The Section 9.1 on road - rail competition is appreciated and the Commission's proposal for a separate inquiry into road provision, funding and pricing is supported. However, until road pricing reforms can be implemented, there will be an urgent need for more Government investment in intercity rail track. There is also a case for the Federal Government to resume funding for programs for urban public transport