



**Submission to the Productivity Commission**  
**Inquiry into the National Access Regime from the**  
**Railway Technical Society of Australasia December 2000**

1. This submission is based on an earlier submissions including those to the House of Representatives Standing Committee on Communications, Transport, and Microeconomic Reform (the Neville Committee) examining the role of rail, the Senate Select Committee on a New Tax System, the Draft Report on Progress in Rail Reform by the Productivity Commission, and, the Senate Environment, Communications, Information Technology and the Arts References Committee Inquiry into Australia's Response to Global Warming.

The Society appreciates that rail track and roads form a limited aspect of the terms of reference for the present inquiry. However, on the basis that the present arrangements including '*...substandard national track*' and hidden subsidies to interstate truck operators and their clients restrict competition for the movement of interstate freight by rail, the Society is taking this opportunity to bring to the attention of the Productivity Commission some land transport access issues.

2. The Society is a technical society of the Institution of Engineers, Australia. The Society was formed in 1998 to take over the function of the former National Committee of Railway Engineering. It now has over 600 members and five Chapters based in mainland State capital cities.

The Society's functions are varied, and included hosting a major Conference on Railway Engineering in May 2000 in Adelaide.

3. In general terms, both the Society and the Institution of Engineers, Australia considers that with the creation of a level playing field and a range of actions to improve the efficiency of both rail and intermodal transport options, railways in Australia can deliver considerable transport cost savings to business and the community. Environmental benefits will also flow as a result.

These environmental benefits would include saving of liquid fuel (which could be important in a time of sustained shortages, or high global prices), and, a reduction in Greenhouse Gas emissions. In this regard, the BTCE Report Transport and Greenhouse; costs and benefits of reducing emissions, Report 94, states, inter alia, on page 214 that: "*Shifting intercapital freight from road to rail is estimated to produce net social benefits (negative costs) as well as reducing greenhouse gas emissions, and these benefits increase as the network is progressively upgraded. The resulting marginal costs are thus negative and declining as more links are upgraded...Shifting intercapital freight from road to rail is a 'no regrets' measure - where the social costs of reducing greenhouse gas emissions are outweighed by the expected social benefits*"

4. Savings in liquid fuel result from the fact that rail freight is on average three times more energy efficient than road transport for general freight. For bulk freight such as iron ore, the railways in the Pilbara which operate at world best practice are at least six times more energy efficient than the most efficient road trains.
5. The RTSA invites the attention of the Productivity Commission to the findings and recommendations of the report 'Tracking Australia' from the Neville Committee, particularly in the areas of:
  - i. track infrastructure quality - both condition and alignment,
  - ii. the need for more Commonwealth funding in the short term, and,
  - iii. education and training of rail staff.

The Smorgon report also expressed concerns about '*substandard national track*'. In respect of track condition, the IE Aust (1999) Infrastructure Report Card noted:

*Adelaide to Melbourne - double stacked container operations not possible due to severe clearance problems, tight horizontal curves and steep gradients (especially in the Adelaide Hills area) impact on transit times. Rating: E.*

*Melbourne to Sydney to Brisbane - poor track condition [in Victoria], steam age alignments [and some signalling] severely impact on transit times and make the running of a rail operation almost non viable. Rating: F minus.*

- i. In regards to **track condition and alignment**, the Final Report of the Productivity Commission (page 237) notes, inter alia, in their final report on progress in rail reform: "*A significant number of submissions pointed to problems with the existing rail infrastructure*" with quotes including:

*Many of the vital transport networks ... [including the standard gauge network], both interstate and intercity, are in dire need of considerable upgrading ...*

The Australian Shipping Federation

*At an infrastructure level, the lack of investment on track and signals constitute one of the main factors which has resulted in slow track speeds and low axle load capacities.*

The Australian Wheat Board

*The infrastructure is sub-standard and is still after several years subject to severe speed restrictions and passing loop and signalling inconsistencies.*

CRT Group

*The poor quality of interstate rail infrastructure is a legacy of many decades of neglect by State governments, and has many aspects ... [including obsolete alignments, obsolete signalling and communications equipment, short crossing loops, inadequate height clearances, inadequate track strength and poor quality track structure].*

National Rail Corporation

*Most operators have expressed their concerns regarding ... the poor track condition, the lack of long passing loops, inconsistent and prohibitive speed limits, the inability to double stack containers from Melbourne and the far from world's best practice maximum axle weights.*

#### Specialized Container Transport

The RTSA submission was also cited by the Productivity Commission (page 237) "... the network has numerous speed-weight restrictions due to: wooden sleepers in Victoria; light weight rail on the Melbourne to Albury standard gauge track; a curve for every kilometre plus steep ruling grades from Albury to Sydney; poor alignment from Sydney to Brisbane ..."

Quite simply, although Australia has heavy freight trains in the Pilbara and the lighter intermodal trains to Perth are fast, we do not have fast and heavy freight trains to the American standard. This is due to mainline track; the United States standard is 68 kg per metre, where over half of our 8000 km odd national network is laid with rails weighing 47 kg per metre.

Poor mainline **track alignment** should be of interest to the Productivity Commission in its present inquiry, as may the more positive aspects of Queensland Rail's Mainline Upgrade (MLU) to remedy speed weight restrictions. We suggest that MLU was an essential part of rail reform in the 1990s in that the MLU track upgrading, including 120 km of high quality deviations and hundreds of new bridges, allowed for faster and heavier freight trains. MLU also assisted in the introduction of the Brisbane - Rockhampton tilt train on 6 November 1998.

Fixing poorly maintained standard gauge track on good alignment in Victoria, or good track on poor alignment in NSW and the Adelaide Hills, as recognised by the National Transport Planning Taskforce (NTPT) in 1994-95, and the Neville Committee's report in 1998, will require investment.

- ii. The RTSA commends the Neville Committee's recommendation for funding, and at the very least, the recommendation of the Smorgon Task Force to expedite the \$250 million investment, and then provide an extra \$470 million.
- iii. The education and training of rail staff is also important. Running a large railway is a complex business, and requires a diversity of skills, trades and professions (including accountants, engineers, and now lawyers). To realise its potential, rail infrastructure will need to be upgraded which requires a significant number of both skilled rail engineers and technically competent managers. The present indications are that in some areas, there will be a serious shortage of qualified railway engineers. The RTSA emphasises the seriousness of the situation, with our 1999 summary report, and quotes again from our original submission re *Skills Training and Education*.

*The rail industry has been extensively downsized and it is of concern that, in the future, there will be insufficient Australian expertise to adequately service the rail industry. Shortages have already occurred in specific areas. ...The shortages will become increasingly apparent in the near future as many of the industry's aged workforce retire. Currently, due to the fragmented nature of the industry and the industry's turmoil resulting from large-scale retrenchments, rail organisations have not undertaken skills training to mitigate the anticipated skills shortages, particularly for tradespeople and professional engineers.*

*A research project undertaken by the Institution of Engineers Australia has confirmed that shortages of railway engineers will occur in the future.*

The findings of the project are in the 1999 report "Engineering for Rail Sector Growth."

It is recommended that a rail sector-wide strategy be developed to eliminate future engineering skills shortages. The strategy should be developed by representatives from industry, government, professional associations and education providers.

6. The issue of antiquated safeworking systems also deserves attention. One example is that cited in the ABC 7.30 Report for 6 November 1998, with an old staff system between Acacia Ridge (in Brisbane) and Casino (NSW) requiring big heavy freight trains to stop at every crossing loop.

Two further NSW examples are the 'block telegraph' systems still in use between Exeter and Medway, and, Harden and Wallendbeen on the Main South Line linking Australia's two largest cities. Just imagine if the telecommunications networks linking Sydney and Melbourne had to rely on technology that was been introduced in 1900.

In addition, the situation at Ararat in Victoria where interlocking was removed in the mid-late 1990s, and two freight trains collided in November 1999 (the subject of a ATSB report) is deficient and needs remedying.

7. RTSA appreciates the fact that rail has received a full rebate for diesel use as of 1 July 2000. Most of this rebate will be passed onto rail freight customers. However, road diesel excise has also fallen by about 20 cents per litre. As rail freight is on average three times more energy efficient than road transport, if world oil prices fall back to the levels they were at up to mid 1999, there may be the loss of some general freight traffic to rail.

RTSA also appreciates that the long awaited Alice-Springs to Darwin railway is due to commence, and we support the construction of this line on defence and other grounds.

However, the response of the Federal Government of April 2000 to the Neville, Smorgon and Productivity Commission reports on rail was very limited, and the May 2000 Federal Budget continued to withhold funds from rail on various pretexts. These included the need for further rail reform, and, the view that some States are allegedly impeding rail reform.

- i. No one denies that further rail reform is necessary. However, road reform, including harmonisation of state based safety regulations has been a long process. At no stage was National Highway System funding ever denied by the Federal Government to expedite road reform. Why use this strategy for rail?

- ii. Victoria and South Australia had joined with the Australian Rail Track Corporation (ARTC) in its early days to provide track access, as envisaged by the 1997 Inter-Governmental Agreement. Victoria has also agreed to sell its share of National Rail to the private sector. Strengthening the Melbourne – Adelaide track would also make the new Alice Springs – Darwin link, which we support, more relevant to Victoria. A 15 year lease signed in 2000 between the Victorian Government and the ARTC, envisaged more Melbourne - Adelaide track upgrading. However, this did not extend to lifting of overhead clearance of double stacked containers, and some track straightening on the Eastern side of the Adelaide Hills. This would improve the value of the Alice-Springs to Darwin railway.
8. The issue of competitive neutrality between road and rail does impact on the economy as a whole, and hence the ability of Australia to invest in infrastructure.

As part of its rail inquiry, the Productivity Commission proposed an inquiry into road provision, funding and pricing. The Federal Government declined to hold such an inquiry, thus prolonging the time it will take to get road pricing onto a more commercial basis.

It is important that in the meantime, rail infrastructure be 'brought up to speed' including the ATC goal of 80 km per hour for interstate intermodal freight trains. This will require capital works, with some rail deviations in certain locations.

There is a valid question as to whether Federal land transport dollars should be diverted from road to rail track upgrading. On the one hand, one could argue that both road and rail should receive more capital funding. However, the RTSA accepts the NTPT, Neville Committee, and other recommendations that in effect Federal land transport dollars should be allocated on economic grounds rather than political grounds, with defence, environmental and social factors taken into account. There is ample evidence of 'gold plating' on some Federally funded road works, including for example, the Adelaide Hills road tunnels etc at some \$140 million (see Neville Committee plus our SA/WA brochure). The same amount of money spent on the Adelaide - Melbourne railway would allow for double stacking of containers and some realignment to ease grades and curves on the eastern side of the Adelaide Hills. RTSA is not calling for a halt on existing Federally funded road works, although there may be a case for some slowing down and/or imposition of tolls in some cases. However, we would expect all future proposals for road works needing Federal funds to be evaluated, using consistent and transparent criteria, against intercity rail upgrading proposals, and proposals to improve urban rail public transport.

In regards to rural road works, whilst the Society is in favour of spending money on some 'local' rural roads, the Society is concerned that with the Government statement on 27 November 2000 that the Federal Government could not find a small proportion to spend on railway infrastructure, which, apart from anything else, will help to take the pressure off roads.

Whilst it is necessary to bring our roads back 'up to scratch' now in a once-off spending spree, what happens when the current pot of money runs out? Will the roads be allowed to deteriorate again to the state that they are now in, so that another group of pollies can gain political capital by having another spree at some time in the future. It is a very ad hoc way to look after our infrastructure.

Previous submissions has urged that Australia forms a National Infrastructure Advisory Council (NIAC). This could help to ensure that existing infrastructure is maintained to a proper standard on an ongoing basis (and also to ensure that new infrastructure is not constructed, unless the ongoing maintenance is planned and budgetted for).

As proposed, an NIAC would be a national council reporting to the Council of Australian Governments (COAG). By June 1997, 22 peak business and industry associations had endorsed the NIAC proposal. The RTSA invites the Commission during this inquiry to at least consider the well supported proposal for a National Infrastructure Advisory Council.

9. One reason that some rural roads are showing signs of stress is that the weight limits approved by the National Road Transport Commission (allowing, in NSW, standard mass limits for a six axle articulated truck to rise from 38 tonnes to 42.5 tonnes) has added extra loads on roads.

There is also evidence that both the first generation National Road Transport Commission road user charges, and the second generation NRTC charges introduced 1 July 2000 result in under-recovery of road system costs from the heavier long distance trucks. As mainline rail tracks are supposed to 'pay their way' this introduces distortions.

10. Separation of rail functions The RTSA suggest that there is a good case for vertical separation of rail systems, and also, Queensland Rail (QR) is justified in maintaining its current configuration. It is worth noting that, from a technical viewpoint, there is a fundamental flaw in the concept of separating above and below rail sections of the industry. The wheel/rail combination is an integrated system, and keeping wheels rolling on rails in an efficient manner is essential to good rail productivity. If the responsibilities for different parts of this system are given to different organisations, inefficiencies in the use of the rail and the use of the rolling stock will start to creep in. Technical advances encompassing the wheel/rail system will be retarded. Evidence of this is already appearing in Australia (with the delay in fixing the track between Geelong and Ararat where new concrete sleepers sat by the side of the track in poor condition between 1995 and 1999, the delays in installing a triangle at Parkes to 1999, and the delays in improving safeworking systems), and, in North America where some rolling stock owners have no responsibility for the track. One of the reasons why Government rail systems went into decline in recent decades was the historical fact that the Chief Mechanical and Chief Civil Engineers would not talk to each other. QR has overcome this problem, and is reaping the benefits as shown, for example, by the introduction of the first regular tilt train service in the Southern Hemisphere (which required track upgrading as well as construction of the new tilt trains). But now certain interests continue to put a formal division (rather than the artificial one that used to exist) between the two parts of the rail technology!

In addition, the RTSA sees considerable merit in good public enterprise in the operation of efficient railways, and advocates a mixed ownership of rail networks. This is to foster competition between the public and private sector as well as increasing the opportunities for innovative activities.

The RTSA also sees it as essential that public, as well as private, rail entities be entitled to earn a good return on commercial operations, and be able to provide sufficient funds to upgrade their infrastructure and to uptake new technology so as to remain competitive.

11. The RTSA seeks support for the early formation of a National Rail Transport Commission to assist the process of advancing rail reform. The new National Rail Transport Commission should be formed in a co-operative venture between the Commonwealth, States and Territories. If the Australian Transport Council cannot form one by 30 June 2000, the matter should be referred to COAG as a matter of urgency.

It is of note that the Senate Select Committee on National Competition Policy in its February 2000 report 'Riding the winds of change' recommended that 'Given the significance of road and rail infrastructure, that transport be a matter of priority consideration by COAG.', and, that "NCC should address the issue of road-rail competition for freight as a matter of urgency." Whilst the Federal Government response to these two recommendations has been less than positive, this should not stop the Commission from advancing the issue.

12. Attention is also drawn to the need for more rail research, which has contracted in Australia over recent years and is necessary for technology uptake. The Federal funding of rail research lags far behind Federal funding of road research. As indicated by the Final Report of the Productivity Commission, and more recently, by the Senate Environment, Communications, Information Technology and the Arts References Committee Inquiry into Australia's Response to Global Warming in their November 2000 report 'The heat is on', an improvement in the quality and quantity of land transport data in Australia is also called for.