



AUSTRALASIAN RAILWAY ASSOCIATION INC

The Parliament of the Commonwealth of Australia

House of Representatives Standing Committee on  
Primary Industries and Regional Services

Inquiry into  
Infrastructure and the Development  
of Australia's Regional Areas

SUBMISSION

April 1999

Level 5, 500 Collins Street, Melbourne, Victoria 3000  
PO Box 266, Collins Street West Melbourne, Victoria 8007, Australia  
PHONE: (03) 9614 5162 FAX: (03) 9614 5514

---

<b>About this submission .....</b>	<b>3</b>
<b>About the Australasian Railway Association .....</b>	<b>3</b>
<b>Rail's contribution to Australia's economy .....</b>	<b>4</b>
The Economic Importance of Rail .....	4
Role of Rail in Regional Australia .....	4
Freight .....	4
Regional and Short Haul Operators .....	5
Regional Passenger Services .....	5
<b>Efficiency Improvements in Rail .....</b>	<b>6</b>
<b>Rail Industry Employment .....</b>	<b>7</b>
Regional Economic Benefits .....	7
<b>Benefits of Rail Industry Investment .....</b>	<b>8</b>
Exports .....	9
<b>Economic and Environmental Benefits of Rail .....</b>	<b>9</b>
Energy Efficiency and Greenhouse Gas Emissions .....	9
Road Construction and Maintenance Costs .....	10
Road Safety .....	12
<b>Barriers to Improved Productivity .....</b>	<b>12</b>
Diesel Fuel Excise .....	12
The New Tax System .....	13
Removal of diesel fuel excise from rail .....	13
Lack of Investment in Rail .....	14
<b>Conclusion .....</b>	<b>15</b>
<b>REFERENCES .....</b>	<b>16</b>

## About this submission .....

Australia's rail industry has changed dramatically in the past five years.

Profitability, privatisation and innovation are the key words of today's rail industry. Australia's railways have embraced reform, cut costs and sought new markets.

This submission highlights the economic benefits that the rail industry provides to regional areas.

The rail industry makes this submission as part of its ongoing partnership with State and Federal Governments to further the contribution of rail to Australia's regional economic development.

Rail's contribution to Australia's economic and environmental welfare will be strengthened by Governments taking a more active role in developing integrated transport policies for regional Australia.

### About the Australasian Railway Association

The Australasian Railway Association Inc (ARA) is the peak industry body for the rail sector in Australia and New Zealand. The ARA is a unique rail association. It represents the interests of both private and government owned rail operators (both freight and passenger); track owners, manufacturers of locomotives, rollingstock, signalling and communications; equipment suppliers; maintenance and construction companies; freight forwarders, investment banks, lawyers, IT and service providers, consultants and unions.

The Association was founded in 1994 and currently has a membership of 120. Members of the Association employ over 75,000 workers in virtually all parts of both countries. The rail industry in Australia provides significant economic benefit to the country of around \$7 billion per year. Association members are also large exporters of goods and services and their rail expertise is widely recognised in the region as being of the highest quality. The Australian rail industry presently holds overseas contracts worth over \$500 million, primarily in Asia.

The majority of members (90%) are in the private sector and are profitable enterprises trading in highly competitive domestic and international markets. The Association is entirely funded by its members through membership fees.

## Rail's contribution to Australia's economy

### The Economic Importance of Rail

Australia's 40,000 kilometre rail network is a significant national asset and plays a key part in the economic well being of the country. Australia's railways play a major role in hauling the nation's freight, serving intrastate and interstate markets and many important economic regions.

Many regional passenger services provide a fast, efficient transport alternative to cars and buses, helping link regional centres with capital cities. Long distance rail tourist services provide significant economic benefit to many regions around Australia such as Kalgoorlie, Broken Hill, Cairns and Alice Springs.

Rail employment in Australia's regional areas generates significant economic benefit by returning millions of dollars in earnings to those areas each year

### Role of Rail in Regional Australia

#### Freight

**Rail freight services are an integral part of the distribution process for intrastate and interstate freight and a range of regional produce and bulk export commodities. These products are hauled safely and efficiently from inland production areas to warehouses, stores, processing plants and ports hundreds of kilometres away.**

All iron ore haulage, 80% of coal and 70% of grain are hauled by rail, including 90% of export coal and 80% of export wheat. Iron ore, coal and wheat comprise 20% of Australia's exports worth \$15 billion per year to the nation's export economy.<sup>1</sup>

Efficiency improvements in Australia's railways have lowered the cost of grain transport by 25% over the past ten years. This has significantly improved the export competitiveness of Australian wheat and lowered domestic food production costs.

Rail carries 40% of interstate freight. This ranges from around 70% of east-coast to Perth freight to just over 20% of Melbourne-Sydney traffic. Interstate rail freight services significantly improve road safety and reduce road construction and maintenance costs in regional areas that are on interstate transport routes.

In addition to coal, wheat and iron ore, rail plays a vital role in transporting other agricultural and mineral products. Rail hauls many farm inputs such as fuel, fertiliser and a wide range of general freight commodities.

In Victoria, rail transports grapes, oranges, dried fruit and wine from the Mildura and Goulburn Valley areas and paper products from the LaTrobe Valley. Rail provides an efficient and economical transport service for goods from these regions to domestic markets and ports. Up to 50% of general freight is hauled by rail in some intrastate corridors demonstrating the benefits of efficient regional rail services.

Wine and other export commodities from the NSW Riverina area are transported by rail to the docks in Melbourne and Sydney. These commodities are transported safely and quickly direct to port avoiding road congestion around Sydney's docks.

Rail freight services provided by FreightCorp and FCL Transport between Sydney and the NSW Central West region save thousands of truck trips over the Blue Mountains each year improving road safety, reducing road damage and road congestion. These services also significantly reduce pressure for a Federally funded freeway over the Blue Mountains that would cost at least \$1 billion and cause extensive damage to the Blue Mountains National Park.

---

<sup>1</sup> 1998 Australian Bureau of Statistics Yearbook, p775

Queensland Rail and National Rail Corporation haul fruit and vegetables damage-free from North Queensland to southern domestic markets in transit times that are competitive with road. The \$590 million Main Line Upgrade of Queensland Rail's north coast mainline between Brisbane and Townsville was instrumental in enabling this service to be developed. Without the upgrade much of this traffic would be transported by road increasing road damage and congestion on the parallel Bruce Highway.

Rail is an integral part of the transport chain transporting potatoes 2,000 kilometres from Tasmania to Queensland for use as chips in McDonalds and KFC. Rail is the preferred land transport mode because the potatoes are transported quickly, efficiently, safely and reliably without any loss of quality and at a price competitive with Queensland produce. Rail services enable regional Tasmania to be competitive in national markets.

In Queensland, rail is vital to the State's livestock farmers. Livestock is conveyed hundreds of kilometres with minimal loss using specialized wagons and containers. General freight services provided by Queensland Rail carry essential commodities to many rural communities and are essential in helping to minimise transport costs to these communities.

In Tasmania, the newly privatised Tasrail is demonstrating its importance to regional economies by reopening lines and aggressively winning back traffic that had been lost to road. This will keep thousands of trucks off rural roads each year, saving millions of dollars in road maintenance costs. Cement, coal, logs, containers, newsprint and even milk have all been targetted for increased market share by Tasrail.

Rail's ability to service high value, time-sensitive markets is demonstrated by Tranz Rail in New Zealand. The company hauls 3.2 million litres of milk by rail per year from storage tanks to a major dairy for processing. Tranz Rail won the contract from road transport by being able to provide competitive bulk rates using specially designed wagons. Tranz Rail is now critical to the economic performance of the dairy industry in the North Island region it serves.

#### Regional and Short Haul Operators

**Regional and short-haul private rail operators are playing an increasingly important role in Australia's rail freight task. Many of these operators are based in rural areas and provide a significant boost to local economies by improving the distribution process and competitiveness of rural produce.**

Private rail operator Austrac, for example, has been highly successful in winning wine, grapes and fruit back to rail in the NSW Riverina region for transport to Melbourne and Sydney.

The myth that rail cannot compete with road over short distances is being exposed as just that – a myth.

These operators have minimal overheads, are highly customer focussed and have successfully regained traffic lost to road. This provides benefits to regional economies through increased employment, reduced road maintenance and construction costs and fewer road accidents.

Regional roads are generally not constructed or maintained to the same standard as major highways. More freight on rail in these areas reduces the need for costly road upgrades as well as minimising the potential for road accidents involving heavy trucks and the associated cost of road trauma.

#### Regional Passenger Services

Non-urban rail passenger services provide fast, safe efficient access between regional areas and capital cities for business and tourism.

Non-urban diesel hauled passenger services, some of which are private commercial operations, are an integral part of Australia's tourism and hospitality industry. There is a significant opportunity for rail passenger services to play a larger role in Australia's tourism market.

Private rail operator Great Southern Railway's passenger services and Queensland Rail's Traveltrains are tourist icons for Australia. They are part of the overall tourism experience to varied parts of Australia for thousands of people each year. Private rail operator West Coast Railway in Victoria generates significant income for tourism operators in the south west region of Victoria. Other private passenger rail operators provide important tourism links in other areas.

These trains provide cost-effective, comfortable, convenient and practical tourism ventures that appeal to local and overseas tourists. They are able to carry hundreds of people to a range of destinations and provide a vital link in the viability of many tourism ventures.

Non-urban rail passenger services also have an important role linking major regional centres with capital cities (eg Warrnambool-Melbourne, Goulburn-Sydney, Kalgoorlie-Perth, Rockhampton-Brisbane). These services, some of which are privately operated, provide fast, comfortable, car competitive transport alleviating road accidents, air pollution and urban road congestion.

Queensland Rail's 160 kph tilt train operating between Rockhampton and Brisbane has significantly boosted regional economies in the state's lower north-coast by greatly reducing travel times between the two cities and major centres along the route like Bundaberg, Maryborough and the Sunshine Coast.

Thousands of commuters are carried by rail each weekday from major regional centres such as Geelong and Ballarat in Victoria, Wollongong and Gosford in NSW, and Queensland's Gold Coast to their respective capital cities in transit times that are usually faster than cars. These services keep thousands of car journeys off roads, reducing fuel consumption, air pollution, greenhouse gases and road accidents.

**For example, one V/Line passenger train carrying 400 people between Geelong and Melbourne keeps 320 cars off the parallel freeway, saves 2,500 litres of fuel and 6 tonnes of greenhouse gas emissions and reduces congestion and car parking problems in Melbourne.**

**Without adequate regional rail infrastructure these journeys would be undertaken by road causing enormous pressure on existing road networks and the requirement for millions of dollars in additional road funds, some of which would be Federal funding.**

There is presently significant pressure from western Victorian councils and the Victorian Government for a \$237 million upgrade of the freeway between Geelong and Melbourne. State and local governments are seeking a Federal Government contribution of half that amount. The objective of the upgrade is to improve road safety and relieve traffic congestion on the freeway.

Yet for just 10% of the cost of upgrading the freeway, the parallel railway could be substantially upgraded to provide faster, more frequent rail services that would eliminate the need to upgrade the freeway because more people would travel by train.

These are the benefits that regional rail services can provide.

## Efficiency Improvements in Rail

Australia's railways have been leaders in industry reform. **Productivity and efficiency improvements over the past ten years have saved Australian Governments around \$2 billion.**<sup>2</sup>

Government rail freight employee productivity has increased 200% and costs per net tonne kilometre of freight have declined 25%. Rail freight rates on major corridors have declined by over 40% in the past five years saving rail customers millions of dollars.

Freight haulage has increased 62% to 130 billion net tonne kilometres per year. Rail, road and sea each haul about one third of Australia's net tonne kilometres of freight, excluding pipelines.<sup>3</sup>

---

<sup>2</sup> *Analysis of the Rail Deficit*, BTCE Information Paper 40 (1995), p6 and Rail System Annual Reports

<sup>3</sup> *The Growing Efficiency of Australian Rail Operations*, P Laird (1997), p1

All rail freight services are profitable or close to profitable and there is no net cost to taxpayers from government rail freight operations.

Government financial support for rail passenger services has declined by 40% and a number of these are now operating profitably.

CSO/subsidy payments for rail passenger services are around \$800 million per year. Rail passenger employee productivity has increased 90% over the past ten years. Governments are seeking to further reduce the cost of rail passenger services (both urban and non-urban) through privatisation and other efficiency improvements.

## Rail Industry Employment

### **Rail industry employment covers a diversity of skills and industries.**

There are over 180 private and public companies involved in the Australian rail industry employing around 80,000 people in urban and regional Australia.

There are over 50,000 people employed in rail operations with manufacturing and maintenance services providing another 10,000 jobs. Signalling and telecommunications employs over 400 people in a very specialised, technical field. These are just some of the areas in which investment in Australia's regional rail infrastructure creates employment and develops highly skilled expertise.

Nearly 50% of rail industry employees are in the private sector. Public sector employees are predominantly in the large rail government rail operators. However, that is changing as more public sector railways are privatised.

Despite decline in the railway workforce over the past three decades, The rail industry is still a major employer in both urban and regional Australia despite the workforce reductions resulting from significant reforms.

## Regional Economic Benefits

Rail industry employment is a significant contributor to many rural and regional economies. In many of these areas, rail equipment manufacture and maintenance is the main source of employment. Without a strong domestic rail industry, many of these economies would be in serious decline and Australia would lose significant domestic manufacturing expertise and capacity.

Large regional centres such as Townsville, Gladstone and Maryborough in Queensland; Newcastle, Wollongong/Port Kembla, Lithgow and Broken Hill in NSW; Geelong and Bendigo in Victoria; Kalgoorlie in Western Australia; Port Augusta and Port Lincoln in South Australia and Launceston in Tasmania employ significant numbers of people in train operations, manufacturing and maintenance.

Many small towns in regional Australia often rely heavily on the economic input from train crews and track maintenance personnel. For example, railway employees make a significant contribution to the economies of Roma and Cloncurry in Queensland; Werris Creek, Taree and Mittagong in NSW; Dimboola in western Victoria and Picton and Merredin in WA.

The iron ore railways in the north-west of Western Australia are significant employers of train operating staff and track maintenance personnel. Sugar cane railways in coastal areas of Queensland employ around 1,000 people each year during the harvesting season.

New private railway operators have created jobs in towns such as Casino and Junee in NSW and Warrnambool in Victoria.

The economic contribution of over 200 rail industry employees involved in train operations and rolling stock maintenance is important to the South Australian city of Port Augusta, population 14,000. Rail employees at Port Augusta operate trans-Australian freight trains, the world famous "Indian Pacific" and

“Ghan” passenger trains and coal trains for SA’s power supply. Repairs and maintenance of diesel locomotives used on interstate and SA freight trains are also carried out at Port Augusta.

The manufacture of electrical equipment for locomotives and suburban passenger trains provides jobs for tradespeople and support staff in the NSW city of Bathurst. Another central west NSW regional centre, Parkes, benefits from the presence of train operating crews, track maintenance personnel and a new rail/road freight interchange.

The Maryborough/Bundaberg region in Queensland is highly dependent on the rail industry for its economic prosperity. The rail industry is the region’s largest employer with over 600 people working in manufacturing and rail operations. Walkers/Adtranz in Maryborough has built electric rail cars for the Brisbane and Perth suburban systems, built Queensland Rail’s 160 kph tilt train – the fastest narrow gauge tilt train in the world - and, in a world first, is building the first narrow gauge alternating current traction diesel electric locomotives. The company is presently constructing 102 additional electric railcars for Brisbane’s suburban system and its new airport rail link.

Manufacture of this equipment in Australia has provided the town of Maryborough with a significant economic boost and developed major export potential for Australian expertise.

The NSW Hunter Valley economy has benefited from a long association with the rail industry. Rail manufacturers, coal transport from Hunter Valley mines, interstate and regional rail freight services and the region’s numerous rail passenger services employ over 2,000 rail industry employees, making it one of the region’s major employers.

Rail manufacturers in the region make locomotives, passenger carriages, coal wagons and component parts for this equipment. Much of this is manufactured for domestic use, but there is a strong export focus. Rail industry investment has helped the Newcastle region withstand the decline of shipbuilding and steelmaking. For example, 80 suburban carriages worth \$220 million for Sydney’s suburban rail network are to be constructed in Newcastle creating 200 jobs.

Rural branch railways enable grain producers to move their produce economically and efficiently to domestic and overseas markets. These rail links also reduce road maintenance requirements by keeping large numbers of grain trucks off rural roads. In NSW the feasibility of reopening a number of rural branch lines is being investigated because of the resultant reduction in road wear and tear.

Lines being considered for re-opening are:

- Cowra to Eugowra
- Greenthorpe to Grenfell
- Cootamundra to Tumut and Batlow
- Narrandera to Tocumwal
- Yass Junction to Yass Town
- North Star to Boggabilla

Major rail upgrading projects and track maintenance works contribute to the economic development of rural Australia. The \$240 million upgrade of the railway between Rockhampton and Townsville in Queensland will create 1,200 jobs in a wide range of occupations. The manufacture of 1.5 million concrete sleepers for this project will create employment in Rockhampton, Mackay and Townsville.

The Federal Government’s interstate rail upgrading program will provide a variety of jobs in rural areas including engineers, surveyors, labourers and specialised rail track equipment operators.



## Benefits of Rail Industry Investment

The Australian rail industry invests \$1.5 billion annually in manufacturing and maintenance of locomotives, passenger cars and freight wagons.

This investment develops and maintains a highly skilled workforce that is able to produce rail equipment domestically rather than having to rely on imports.

Domestic manufacturers produce locomotives, freight wagons, passenger carriages, track and signalling equipment and their component parts for domestic and overseas markets while providing Australia with a highly skilled manufacturing workforce.

Significant haulage of iron ore and coal has enabled Australia's rail industry to develop an enviable reputation for the design and construction of heavy haul railways. The world's heaviest trains serve the iron ore mines of the Pilbara region in Western Australia.

A strong domestic rail industry lowers the cost of rail transport and improves the export competitiveness of many commodities, particularly iron ore, coal and wheat. Manufacture of domestic rail equipment avoids the need for imports of similar equipment.

Research by the Victorian based Industrial Supplies Office has shown that for every \$1 million invested in manufacturing, 22 full-time jobs are created with an additional \$1.2 million in value-added production.

### Exports

The Australian rail industry is developing a high overseas profile. The level of Australian rail industry exports has increased from \$50 million per year in 1994/95 to over \$500 million worth of goods and services last year, primarily to Asia. These countries are increasingly seeing Australia as an innovative supplier of quality rail products, services and technology.

This level of growth is matched by very few other Australian industry sectors. It is unmatched by any other manufacturing industry.

Some of the more significant rail industry export contracts include electric locomotives to India; electric passenger vehicles to Philadelphia, USA; light rail vehicles to Kuala Lumpur; freight wagons to Israel and signalling systems to Indonesia, Thailand and Taiwan.

Many of these exports are fully or partly built in regional areas of Australia.

The manufacturing expertise gained through investment in the domestic rail industry has helped Australia gain a deservedly strong reputation in the overseas rail industry. Strong rail export growth will ensure continued employment for many Australians in regional areas.

## Economic and Environmental Benefits of Rail

The rail industry sees a role for both rail and road and recognises the economic importance of a good quality road network and an efficient road transport industry. However, the rail industry is a cost-effective partner for highways because of its many economic and environmental advantages over road transport.

### Energy Efficiency and Greenhouse Gas Emissions

**Rail freight is at least three times more fuel efficient than road freight and produces less than one third of the greenhouse gas emissions per tonne kilometre of freight hauled.<sup>4</sup>**

Australia ranks sixteenth among major greenhouse gas producing nations, but has the third highest greenhouse gas emissions from transport in the world. It is higher than the OECD average.<sup>5</sup>

---

<sup>4</sup> *The Australian Rail Task, Energy Consumed and Greenhouse Gas Emissions*, Apelbaum Consulting Group (1997), p35, 39

This is because of Australia's excessive reliance on road transport. Distorted investment in transport infrastructure, for example, has resulted in Australia having the highest volume of road freight carried per capita in the world.<sup>6</sup>

A 1991 Australian Senate Standing Committee on Industry Science and Technology 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."

Road transport consumes nearly 90% of Australia's transport energy requirements and produces over 86% of the nation's transport greenhouse gas emissions.<sup>7</sup>

In contrast, rail transport consumes just 3% of Australia's domestic transport energy consumption and contributes only 2% of transport greenhouse gas emissions.<sup>8</sup>

Australia's railways haul over half of the combined rail and road non-urban freight task, but use only 15% of the energy requirements and produce only 18% of the greenhouse gas emissions from that task.<sup>9</sup>

The advantages of rail over road for long distance freight haulage are demonstrated by Specialized Container Transport, a private freight forwarding company using general freight trains between Melbourne and Perth, a distance of 3,500 kilometres.

In the company's first two years of operation from June 1995, it carried over 300,000 tonnes of freight saving 15,000 semi-trailer movements, 100 million litres of fuel and 290,000 tonnes of greenhouse gas emissions compared with road haulage.

**Similarly, one freight train operating over the nearly 1,000 kilometres between Melbourne and Sydney can replace 150 semi-trailers and save 45,000 litres of fuel and 130 tonnes of greenhouse gas emissions compared with road haulage.**

The implications of these rail benefits for regional Australia are profound.

For example, one 3,000 tonne grain train operating 500 kilometres from Victoria's grain region in the north-west of the state to the port of Geelong replaces 100 semi-trailers, saves 20,000 litres of fuel and reduces greenhouse gas emissions by 58 tonnes.

Heavier iron ore, coal and grain trains operating throughout regional Australia provide even greater benefits in terms of saving fuel and greenhouse gas emissions compared with road transport.

**Rail is still twice as energy efficient as road even after fuel use has been included for rail line haul, road pick up and delivery from rail terminals, manufacture of transport equipment and construction of roads and railway lines (the 'full fuel' cycle).<sup>10</sup>**

In Australia, fuel consumption by articulated trucks is forecast to increase 70% over the next 15 years; greenhouse gas emissions from articulated trucks are forecast to increase 75% over the next 15 years.<sup>11</sup>

Increased use of rail freight services in regional areas will reduce these forecasts and make it easier for Australia to fulfill its greenhouse gas commitments under the Kyoto Protocol.

---

<sup>5</sup> *Australian Transport and the Environment*, ABS 4605 (1997), p80

<sup>6</sup> *Roads in the Community – A Summary*, Austroads (1997), p17

<sup>7</sup> Apelbaum, op cit, pp34,38

<sup>8</sup> Ibid, pp34, 38

<sup>9</sup> Ibid, pp

<sup>10</sup> *Toward a Methodology for Comparative Resource Consumption: Modal Implications for the Freight Task*, ARRB Transport Research Report ARR 318 (1998), p50

<sup>11</sup> *Greenhouse Gas Emissions from Australian Transport*, BTCE Report 88 (1995), pp40-41

## Road Construction and Maintenance Costs

**More freight on rail will reduce demand for bigger roads. A rail line requires only one quarter of the land of an equivalent road and has only one third of the construction and maintenance costs of road.**

Federal, State and Local Government spending on roads amounts to nearly \$6 billion per year. Much of this is maintenance costs to repair damage to the nation's roads caused by heavy trucks.

Increased use of rail freight services will result in less road damage and road maintenance costs. Most wear and tear on roads is attributable to heavy trucks. Articulated trucks comprise only 12% of vehicles on the National Highway System (NHS), but are responsible for two thirds of the road damage to that system. In contrast, cars comprise 81% of vehicles on that system, but cause only 0.1% of road damage to the NHS.<sup>12</sup>

The heavily subsidised road transport industry continues to receive free productivity improvements from governments that allow heavier and longer trucks to operate. In contrast, improvements in rail productivity through heavier and longer trains must be paid for by rail operators through higher track access fees.

The extent of road damage caused by heavier trucks is evident in Victoria. One year after the widespread introduction of B-double trucks in Victoria, bridge construction and maintenance costs increased 150% from \$7 million per year to \$18 million per year.<sup>13</sup>

Increased mass limits for trucks will require at least \$1 billion of scarce public funds to be spent on repairing roads and bridges that are unable to safely handle heavier trucks. Many of the bridges that will require strengthening or repair are in rural areas. The cost of these bridge works will be an added cost burden to rural communities as there are no plans to recover the costs from truck operators.

A fully loaded B-double truck causes the same amount of road damage as 20,000 cars. However, it does not pay for the full extent of this damage.<sup>14</sup> This is in direct contrast to rail operators who must pay for the cost of maintaining and improving their infrastructure through genuine mass-distance based track access payments.

Much of the demand for new, stronger roads and additional road works is to cater for heavier trucks and to separate trucks from cars. A cheaper and simpler solution to these problems is to reduce the number of trucks by improving rail infrastructure and making better use of it.

In 1995, the rail line between Melbourne and Adelaide was converted from broad gauge to standard gauge, isolating three broad gauge western grain lines including the port of Portland. The Victorian government had to decide whether to move all the previous rail hauled grain by road (870,000 tonnes per year) or to convert the three lines to standard gauge to enable rail haulage of grain to Portland to continue.

Analysis of the options undertaken by the Victorian Department of Transport concluded that the most cost-effective method of transporting grain in western Victoria was by converting the three lines to standard gauge for \$20 million. This provided the greatest benefit to the (then) Grain Elevators Board, the Port of Portland, local councils and other industry groups including growers.<sup>15</sup>

---

<sup>12</sup> *Road Facts '96*, Austroads, p33

<sup>13</sup> Boxcar Logistics, Rail Privatisation Conference, May 1997

<sup>14</sup> *Road Access Charges in Queensland under National Competition Policy*, PLI McInnes Van (1997), p10

<sup>15</sup> *Review of Grain Transport in Western Victoria*, Victorian Department of Transport (1993)

The one-off \$20 million cost of converting the western grain lines to standard gauge was significantly less than the additional \$30 million per annum in road maintenance costs that would have been required had the grain been transported by road.

Similarly, the Federal and South Australian Governments funded the conversion of the Mallee grain lines emanating from Tailem Bend from broad to standard gauge. This project has saved the South Australian Mallee region millions of dollars in road maintenance costs and greatly improved road safety in the region by keeping thousands of grain trucks off rural roads each year.

## Road Safety

**Transport accidents cost Australia \$6.5 billion annually. Road transport accounts for over 90% of this cost. In contrast, the cost of rail accidents in Australia is just over 1% of the total cost of transport accident costs in Australia.<sup>16</sup>**

Rail freight transport is seven times safer than road transport with only 0.55 fatalities per billion tonne-kilometres compared with road freight's 3.8 fatalities per billion tonne-kilometres.<sup>17</sup>

Articulated trucks are involved in 9% of Australia's fatal road accidents, but 10% of road fatalities contributing \$160 million to the annual road fatality bill. Despite declining road fatalities over the past ten years, these proportions have remained constant.<sup>18</sup>

Articulated trucks cause 3.5 times more fatalities per vehicle kilometre than cars. In crashes involving cars and articulated trucks, 60% of fatalities are the car occupants.<sup>19</sup> The percentage of people killed in head-on crashes with articulated trucks is nearly double that for all crashes. The cost of hospitalisation for injuries resulting from crashes with articulated trucks cost a further \$60 million per year.

The total cost of *all* rail accidents per year is just one quarter of the cost of road crashes involving articulated trucks. Rail freight services have an enviable safety record and help contain these costs to the community.

## Barriers to Improved Productivity

### Diesel Fuel Excise

**The continued imposition of diesel fuel excise on rail is one of the most significant barriers to further reductions in rail's costs to rural communities.**

The agricultural and mining sectors obtain a rebate on the existing diesel fuel excise rebate because of the sectors' importance to Australia's economy.

Agricultural and mineral products are often sold on highly competitive world markets in which producers are unable to pass taxes on to their customers. The agricultural and mining sectors receive annual diesel fuel excise rebates of \$1400 million.

Rail, however, is ineligible for the diesel fuel excise rebate even though it is vital to the international competitiveness of many agricultural and mineral products.

The importance of rail fuel costs on export competitiveness was recognised by the Industry Commission in its 1994 report *Petroleum Products* that stated:

---

<sup>16</sup> *Social Cost of Transport Accidents in Australia*, BTCE Report 79 (1992), pxvi; and *Cost of Rail Accidents in Australia*, BTCE Information Paper 7 (1993)

<sup>17</sup> ARRB Report 318, op cit, p5

<sup>18</sup> Federal Office of Road Safety Monthly Bulletins

<sup>19</sup> *Trucks and Road Trauma*, Federal Office of Road Safety Monograph 18 (1997)

“The imposition of excise on diesel used in rail services has repercussions for many industries that use rail intensively. The strong support given by mining and agriculture for a renewal of excise exemption for rail is some indication of the importance of rail costs to their international competitiveness”.<sup>20</sup>

Farming groups are strong in their support for the removal of diesel fuel tax on rail, as it will significantly improve the competitiveness of Australia’s grain industry and other export commodities hauled by rail.

The 18 cents per litre fuel tax on rail and road proposed under the New Tax System will cost grain farmers an extra 80 cents per tonne than if diesel fuel excise was completely removed from rail. Nationally this will cost grain farmers \$20 million per year.

Australia’s wheat exports have strong competition from producers in North America where rail operators enjoy cheaper diesel fuel prices and lower fuel taxes.

Many rural towns are struggling to survive. Extra income in farmers’ pockets through lower rail freight rates and increased exports may help the viability of these towns.

### The New Tax System

The 18 cents per litre diesel fuel excise to be paid by rail and heavy road transport (vehicles over 3.5 tonnes) under the New Tax System is widely recognised by the National Road Transport Commission, the Bureau of Transport Economics, the National Farmers Federation and the Road Transport Forum, the peak trucking industry body, as a road user charge. Applying it to rail effectively removes two thirds of present road user charges (fuel tax and registration).

The 1994 Industry Commission report *Petroleum Products* highlighted the inequity of rail paying a road user charge. The report said that the 18c/litre road user charge should not be levied on rail and that:

“The point of a charge for use of roads is to improve road supply and use decisions. Transport decisions would be distorted if road user charges were applied to railways”.<sup>21</sup>

The proposed reduction of diesel fuel excise to 18 cents per litre for rail and road will benefit road transport more than rail because the relative costs for road will be reduced twice that of rail. This will cause an undesirable modal shift from rail to road.

Modal shift of freight from rail to road will increase road construction and maintenance costs, fuel use and greenhouse gas emissions. Ultimately it may lead to a road monopoly of rural freight haulage because rail freight may no longer be viable. This will inevitably cause an increase in rural transport costs because of increased road construction and maintenance costs and loss of modal competition.

Decline in rail business will jeopardise the domestic manufacture and supply of railway equipment. This will cause the loss of many highly skilled manufacturing jobs, the loss of transport design and maintenance expertise, the decline of many rural and regional economies and the foregoing of many export opportunities.

Output of goods and services worth \$7 billion per year will be jeopardised, including construction and maintenance contracts worth \$1.5 billion per year.

Removal of diesel fuel excise from rail

**Completely exempting rail from diesel fuel excise will improve export competitiveness and increase rail’s competitiveness in the general freight market. It will also lower passenger operators’ costs.**

---

<sup>20</sup> *Petroleum Products*, Industry Commission Report No. 40 (1994), p275

<sup>21</sup> Industry Commission, op cit, p276

Lowering of rail costs by complete removal of diesel fuel excise on rail will flow through to the economy via lower costs to users. This includes farmers, miners, manufacturers and shipping companies.

The Industry Commission in its 1994 report *Petroleum Products* found that complete removal of diesel fuel excise from rail would result in a net increase in Australia's GDP of \$120 million per year. Australia's balance of trade would improve by \$40 million per year and export volume would increase by 0.19% per year.<sup>22</sup>

The net annual increase to GDP of \$120 million includes economic benefits across a range of sectors as well as that arising from modal shift to rail.

Coal producers could benefit by \$20 million per year and producers of wheat and other grains could benefit by \$40 million per year.

Operators of diesel powered rail passenger services would save nearly \$25 million per year. These cost savings may be passed on to rural rail passengers through lower fares.

### Lack of Investment in Rail

**Productivity improvements in Australia's rail industry remain hampered by lack of investment. This increases the costs of rail transport to rural communities.**

Due to poor funding, the extensiveness and quality of Australia's rail network was ranked as 2 out of 5 by the London based Economist Intelligence Unit in 1997, the lowest ranking Australia received for any individual indicator.

The recently released draft Productivity Commission report *Progress in Rail Reform* identified lack of investment in rail as a significant constraint on improvements in rail systems' productivity and their ability to operate more efficiently.<sup>23</sup>

Restrictions on train speeds, lengths and weights have all limited the productivity and efficiency of Australian rail operators. Faster transit times and increased train weights would lower rail's costs and improve the export competitiveness of a wide range of commodities.

Lack of investment in rural rail services reduces consumer choice and may lead to a transport monopoly provider – road. This increases the cost of transport to rural communities by increasing road wear and tear on lightly constructed rural roads and bridges, causing more road accidents and using three times more fuel than rail transport. The cost of repairing roads damaged by heavy trucks is a major issue for rural Local Government.

A 1997 BIS Shrapnel report predicted a resurgence in rail's market share of the general freight market, particularly food and beverages. The report said that when rail freight services become genuinely competitive with road, rail's penetration of the general freight market is likely to be as high as 50%. The study forecast annual growth in rail freight of 4.5% over the next five years compared with 3.3% for road.

However, many of these opportunities may go unrealised because of inadequate rail infrastructure.

For example, in many parts of South Australia rail lines have been removed preventing the new private operators of South Australia's freight railways from servicing those areas. Consequently, there is continual pressure in South Australia for bigger and heavier trucks. South Australia has recently increased truck mass limits yet had there been more extensive rail infrastructure more freight could have been carried by rail rather than road.

---

<sup>22</sup> Ibid, pM.6

<sup>23</sup> *Progress in Rail Reform*, Productivity Commission Draft Report (1999), pxxvii

In south-east South Australia, the regional centre of Mount Gambier was previously connected by broad gauge rail lines to Melbourne and Adelaide. The 1995 gauge standardisation of the Melbourne–Adelaide rail line, however, isolated Mount Gambier.

Millions of tonnes of agricultural products and other commodities are now transported by road. Growth in transport of pulp and paper products in the region is now captive to road despite the enormous potential for rail to be an integral part of the transport system in Mount Gambier.

A combination of Federal and State Government funding to convert Mount Gambier's rail lines to standard gauge and reconnect it to Adelaide, Melbourne and Portland would provide substantial relief to the region's road network. In particular, had Mount Gambier been connected to the Port of Portland it would have removed the necessity for the Victorian Government to allow increased truck mass limits in south-west Victoria at a cost of \$4.5 million in bridge strengthening. Many of these trucks are carrying goods that previously would have been carried by rail from Mount Gambier to Portland.

Converting the Mount Gambier rail connection to Portland to standard gauge would have cost about the same as the bridge upgrading works and removed the ongoing road maintenance costs associated with increased use of heavier trucks in the region.

Infrastructure provision in south-west Victoria is a classic example of the lack of integrated transport planning. Integrated transport planning would have evaluated the merits of upgrading bridges for heavier trucks compared with using rail for the same freight task, examining all costs, benefits and externalities. On that basis, it is highly likely that the same conclusion would have been reached that was determined when evaluating the conversion of the western grain lines to standard gauge – namely that the rail alternative is more effective at meeting the region's long term economic interests.

In contrast, the Tasmanian Government intends constructing a \$35 million rail line in the state's north-west to connect a magnesium mine to Tasrail's network. The Government undertook extensive consultation with the mine owners and local communities and concluded that rail was a far more efficient and safer way of transporting the ore than by road. Road transport would have involved B-double trucks passing through local communities every ten minutes for ten hours each day compared with one train each way per day.

Integrated transport planning concluded that rail provided the greatest regional economic benefits in servicing the mine.

## Conclusion

An extensive regional and rural rail network is essential to the nation's economy.

Rail provides value-added services to regional communities by providing safe, efficient transport that is more cost-effective than road. The rail industry's productivity improvements, operational efficiencies and private sector participation have provided many benefits to rural and regional areas in reduced transport costs and job creation.

Regional rail passenger services provide safe, efficient transport for millions of passengers each year and are an important means of transport for commuters and tourists. These services keep thousands of cars off roads each year and are an integral part of many regional tourism economies.

Rail freight services are essential to regional communities by providing safe, efficient transport for iron ore, coal, grain, livestock and a wide range of general freight.

These services keep thousands of trucks off roads each year saving millions of dollars in transport costs through significantly reduced road construction and maintenance costs, fewer road accidents, reduced fuel use and reduced greenhouse gas emissions.

Federal, State and Local Governments all have a role to ensure that rail is an integral part of regional transport strategies. The cost of developing and maintaining regional transport infrastructure would be

substantially greater without rail infrastructure and the economic and environmental advantages it provides.

Investing in regional rail infrastructure develops an efficient transport system and creates hundreds of jobs in manufacture, supply and maintenance of rail track and equipment. Many of these jobs are in regional areas such as the NSW Hunter Valley or regional centres such as Maryborough in Queensland.

Australia's efficient and competitive rail industry provides many benefits to regional and rural Australia. Implementation of integrated land transport policies will ensure that the role of rail in serving these areas continues to grow.



## REFERENCES

- Apelbaum Consulting Group - *The Australian Rail Task: Energy Consumed and Greenhouse Gas Emissions*, 1997
- ARRB Transport Research - *Toward a methodology for comparative resource consumption: modal implications for the freight task*, 1998.
- Australian Bureau of Statistics - *Australia's Transport and the Environment*, 1997
- Australian Bureau of Statistics - 1998 Yearbook
- Austroroads - *Road Facts 96*
- Austroroads – *Roads in the Community: A Summary*, 1997
- Bureau of Transport and Communications Economics Working Paper No.1 – *Greenhouse Gas Emissions in Australian Transport*, 1991
- Bureau of Transport and Communications Economics - *Social Cost of Transport Accidents in Australia*, 1992
- Bureau of Transport and Communications Economics Information Sheet 7 – *Cost of Rail Accidents in Australia*, 1993
- Bureau of Transport and Communications Economics Information Paper 40 – *Analysis of the Rail Deficit*, 1995
- Bureau of Transport and Communications Economics Report 88 – *Greenhouse Gas Emissions from Australian Transport: Long Term Projections*, 1995
- Federal Office of Road Safety Monograph 18 – *Trucks and Road Trauma*, 1997
- Federal Office of Road Safety – Monthly Bulletins
- Industry Commission Report No.40 - *Petroleum Products*, 1994
- Laird, P - *The Growing Efficiency of Australian Rail Operations*, ARA 1997
- PLI McInnes Van – *Road Access Charges in Queensland under National Competition Policy*, 1997
- Productivity Commission Draft Report – *Progress in Rail Reform*, 1999
- Rail systems' Annual Reports