



AUSTRALASIAN RAILWAY ASSOCIATION INC

Productivity Commission
Automobile Assistance
Inquiry

SUBMISSION

July 2002

The Australasian Railway Association

The Australasian Railway Association Inc (ARA) is the political voice for rail in Australia. It is a unique rail association. It represents the interests of both private and government owned rail operators (freight, passenger, tourist and heritage); 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 the two rail unions.

The ARA was founded in 1994 and currently has a membership of 160 in Australia and New Zealand. Members of the ARA employ 80,000 people in regional and urban areas. The rail industry in Australia provides significant economic benefit to the country of around \$8 billion per year. ARA 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 \$500 million per year, primarily in Asia.

The majority of members (93%) are in the private sector and are profitable enterprises trading in highly competitive domestic and international markets. The viability of many export industries relies on the efficiency of the rail sector and fuel represents a major input to that efficiency. The ARA is entirely funded by its members through membership fees.

Executive Summary

The Australian automobile industry is one of the most heavily subsidised in the country. It receives government subsidies of over \$5 billion per year from tax concessions, industry assistance schemes, fuel excise cuts and road funding grants.

These subsidies have resulted in:

- increased car dependency
- increased urban sprawl
- increased transport fuel use and greenhouse gas emissions
- increased greenhouse gas emissions
- increased air pollution and associated health costs
- increased road crash trauma
- increased transport land use

Road transport also costs the community \$31 billion each year in external costs from congestion, crashes, pollution, noise and road damage according to the Bureau of Transport and Regional Economics and other government agencies.

These \$36 billion subsidies cost every Australian \$1800 per year, more than 40 times the cost of operating urban rail services.

Subsidies to motorists are endangering the liveability of our cities and the health of city residents. Over half of urban air pollution in our cities - carbon monoxide, lead, nitrogen oxides and ozone and other particulates - is caused by motor vehicles. Smog caused by motor vehicles contributes to asthma, an illness that kills up to 500 Australians each year and costs the community \$750 million per year in illness and lost productivity. These pollutants also cause brain damage in young children and heart ailments.

Recent research in New Zealand by the National Institute of Water and Atmospheric Research found that vehicle pollution caused a hidden road toll of around 400 people per year, almost as many as were killed in crashes.

In Europe, the situation is worse with the World Health Organisation finding that pollution from cars kills more people than the road toll each year.

The health and air quality of our cities would be significantly improved if governments gave more support to sustainable 21st century employment solutions rather than continuing to subsidise technology that dates from the early 20th century.

Introduction

The biggest threat to the maintenance of our urban lifestyles is the growth in vehicle use in our cities. One third of our cities' land use is roads and car parks - a major cause of urban sprawl.¹

Worldwide studies by Murdoch University in Perth have shown that cities with high car dependency and large amounts of land allocated to car parking are not "economically efficient" or "globally or locally sustainable". There is an inverse relationship between car parking supply and central city vitality.²

Australia has very low urban public transport patronage. It is typically only one third of European cities and is one of the lowest in the world. Despite this, Australia's urban rail systems have delivered an increase in passengers carried of 20% since 1990. This is almost double the rate of population growth over that period despite the fact that there are large parts of our cities that now extend beyond the reach of urban rail systems.

In the last forty years 400 kilometres of urban freeways have been constructed in our cities compared with just 80 kilometres of new urban rail lines. This has created a cycle of car dependency in our cities.

This dependency now costs Australians 17% of their household budgets similar to the amount spent on housing and food.³ In car dependent outer suburban areas, car related costs comprise up to 25% of household income⁴.

Residents on the fringes of our cities are becoming increasingly marginalised because of poor public transport infrastructure.

Our cities can no longer afford car based urban sprawl.

In 1998, the US Congress recognised the benefits of urban rail when it re-authorised ISTEA (Intermodal Surface Transportation & Efficiency Act) which will see at least US\$36 billion spent on transit projects over the five years 1998–2003, 20% of the federal transport budget. The American Public Transportation Association estimates that urban rail services generate US\$5 billion in annual economic and social benefits from reduced congestion, pollution, accidents and increased tax revenue. *Every \$1 invested in urban public transport provides a \$4 return.*⁵

Urban rail services:

- provide fast, safe, efficient transport
- absorb road demand: just one peak hour train replaces a line of cars over 5 kilometres long.
- reduce the high costs of road transport including congestion, accidents, noise, pollution, greenhouse gas emissions and land use
- create long-term sustainable employment

Urban rail is the most efficient form of mass transport. It is over twice as energy efficient as buses, five times as energy efficient as cars⁶ and can move thousands of people quickly and safely using just one quarter of the land of a freeway.

Improved and expanded urban rail systems combined with road demand management and urban planning that coordinates development with rail transport infrastructure provision will maintain and enhance the liveability of our cities.

¹ *Making Money from Better Service*, Conservation Council of Victoria 1993, p3

² *Sustainability and Cities: Overcoming Automobile Dependence* – Newman and Kenworthy, Island Press 1999, pp59&89

³ *Household Expenditure Survey*, Australian Bureau of Statistics 6530/2000

⁴ *Australian Financial Review*, 15.2.01, p30

⁵ *Dollars and Sense – The Economic Case for Public Transport in America*, Campaign for Efficient Transport 1997, p35

⁶ *Research Report 318*, ARRB Transport Research, p56

Transport Greenhouse Gas Emissions

Increasing funding, development and utilisation of public transport must be central to a national effort to reduce emissions from transport

*The Heat Is On: Australia's Greenhouse Future*⁷

Australia's commitment to the Kyoto protocol requires its greenhouse gas emissions to be no more than 8% above its 1990 levels by 2012. However, Australia's greenhouse gas emissions are already 17% above its 1990 levels. Transport now comprises 16% of Australia's greenhouse gas emissions – an increase of 20% over its 1990 level⁸.

Australia ranks sixteenth among major greenhouse gas producing nations, but has the highest emissions per capita in the world and has the 4th highest greenhouse gas emissions per capita from transport in the world.⁹ This is because of Australia's excessive reliance on road transport.

Australia's economy is one of the most fossil fuel dependent in the world. It is no coincidence that Australia has the third lowest petrol prices in the world, after the US and Canada. The level of taxation on fuel is one of the lowest in the world. The price of petrol is cheaper than milk and about the third the price of beer.

Road transport emissions now comprise 90% of transport emissions, an increase of 22% since 1990. Emissions from motorists have increased 19% since 1990. In contrast, rail transport emissions are just 2% of transport greenhouse gas emissions and have decreased 9% over that period despite an increased passenger and freight task.¹⁰

In particular, urban motorists cause¹¹:

- 75% of urban transport greenhouse gas emissions,
- 50% of road transport greenhouse gas emissions, and
- 7% of Australia's total greenhouse gas emissions

In contrast, rail transport has a negligible contribution to transport greenhouse gas emissions including power generated for electric services.

The Bureau of Transport Economics has predicted that Australia's domestic transport greenhouse gas emissions will increase by 48% between 1990 and 2015. Road transport emissions are predicted to increase by 45% with emissions from urban motorists predicted to increase 26%.

Car oriented policies continue to dominate transport infrastructure provision despite rail transport's clear environmental advantages over road transport.

A key goal of the Federal Government's 1998 National Greenhouse Strategy, endorsed by all levels of government, is to reduce vehicle use in urban areas and promote greater use of public transport.

The substitution of public transport, walking or cycling for car-based travel reduces greenhouse gas emissions, improves local air quality and reduces traffic congestion, particularly in urban areas

- National Greenhouse Strategy 1998 (p5)

However, rather than implementing measures to promote and develop public transport, federal government policies are actively undermining public transport.

⁷ Report of the Senate Environment, Communications, Information Technology and the Arts Reference Committee 2000, p241

⁸ National Greenhouse Gas Inventory 1999

⁹ *Energy and Greenhouse Gas Emissions Accounts*, ABS 4604/01, p59

¹⁰ *FACT Sheet 3*, Australian Greenhouse Office 1998

¹¹ *The Australian Rail Task – Energy Consumed and Greenhouse Gas Emissions*, Apelbaum Consulting Group, 1997, p 38

Subsidies to Motorists

The December 1997 edition of *The Economist* called continued road funding to meet demand as 'one of the last relics of a Soviet-style command economy'. It went on to say that if roads were priced like any other scarce commodity better use would be made of existing space and the revenues raised could be used to improve public transport.

As long as road funding continues to be provided by governments without any rigorous economic assessment or thorough appraisal of alternative modes, transport efficiency will be undermined because roads will continue to be over provided and over used.

Continued road funding to meet demand is exacerbated by federal government policies that continue to discriminate against public transport. Since the introduction of the New Tax System on 1 July 1999 there has been:

- Full 10% GST on public transport fares
- Price of new cars reduced by 6%
- Tax credit of 7c/litre for business use of fuel
- Tax credit of 9% for new vehicles purchased for business = \$600m cost to government pa
- Retention of Fringe Benefits Tax favouring salary packaged motor cars over public transport tickets = \$750 million year cost to government per year (company and government cars comprise 20% of all traffic and 40% of peak hour traffic)
- \$2 billion to the car industry over 5 years to 2005 under the Automotive Competitiveness and Investment Scheme in readiness for tariff reductions from 15% to 10%
- 1.5 cent per litre fuel excise reduction = \$600 million cost to government pa
- Cessation of fuel price indexation in 2001: cost = \$2 billion to 2005; \$20 billion to 2010
- Federal road funding increased 40% to \$1.8 billion pa
- Federal and Victorian government commitment to the \$890 million Scoresby Freeway in Melbourne's south east
- Federal and NSW government commitment to Sydney's \$1.2 billion Western Orbital
- No federal funding for urban rail infrastructure projects

These taxpayer subsidies to Australia's motoring industry from tax concessions, fuel excise cuts, industry assistance schemes and road funding grants total \$5 billion per year.

Not surprisingly, new car sales have been increasing to record levels with sales for January 2002 being the best January ever according to Federal Chamber of Automotive Industries (FCAI). Peter Sturrock, head of the FCAI, said that vehicle affordability was at its 'best level for some time.'¹²

General Motors Holden, whose new car sales topped the list, received \$160 million from the federal and Victorian governments towards the \$400 million cost of its new engine plant at Fishermen's Bend in Melbourne as part of the federal government's Automotive Competitiveness and Investment Scheme.

Sustainable, long-term jobs could be created if that money was invested in Australia's urban rail systems instead of being used to subsidise short-term jobs in the car industry.

The federal government's view is clearly that what's good for the car is good for the economy. More people are using cars so we need more roads, car manufacturing creates jobs and, in any case, the costs of car use are incurred privately unlike publicly subsidised public transport.

But how private are the costs of car use?

¹² *Australian Financial Review*, 7.2.02

The Real Cost of Roads

According to the Bureau of Transport Economics, the former Industry Commission and the National Road Transport Commission¹³, the costs of road transport due to air pollution, congestion, noise, accidents and road damage are over \$30 billion per year, 6% of Australia's GDP. Other than road damage, these costs do not show up in transport balance sheets and are in effect costed at zero. They are externalities for which all society pays.

Transport Externality	%GDP	Cost	Government Action
Congestion	2.6	\$12.75 billion	More \$\$ sunk in road construction, rather than invested in improved public transport
Air pollution	0.25	\$1.25 billion	Attempt to manage emissions through fuels (eg unleaded fuel) rather than reduce amount of emissions by reducing number of vehicles
Noise	0.1	\$500 million	Millions spent on noise barriers to contain the symptom (noise) rather than reduce the cause (amount of traffic)
Accidents	3	\$15 billion	Improve driver behaviour (eg TAC ads) rather than provide and promote safer alternatives
Road damage	0.3	\$1.4 billion	Build stronger roads
Total	6.25	\$30.9 billion	

Present actions being taken by governments to address these transport externalities are simply exacerbating the problem. The actions completely overlook rail transport as a more economical and sustainable solution. A 21st century approach to transport planning would place increased emphasis on rail to solve these problems rather than outdated 20th century road based technology.

Governments nationally spend \$7 billion on roads each year and receive nearly \$15 billion in revenue from road users. However, the cost of road transport externalities means that:

- every \$1 spent on roads costs \$4 in external costs
- every \$1 received from road users costs the community \$2 in social and environmental costs
- the road deficit is at least \$22.9 billion per annum - (\$30.9 billion in externalities + \$7 billion expenditure less \$15 billion revenue)

The Bureau of Transport Economics¹⁴ predicts the cost of congestion in Australia's capital cities to more than double by 2015 to \$30 billion.

The estimate of the road deficit is not only going to worsen, but it is likely to be an underestimate. The estimates of the social costs of air pollution and noise attributable to motor vehicles have not been revised since they were calculated by the Industry Commission in 1990.¹⁵ Updating the estimate of these costs would most likely see them increased because of the growth in vehicle traffic since 1990.

¹³ Bureau of Transport Economics *Urban Transport - Looking Ahead* Information Sheet 14, 1999 and *Road Crash Costs in Australia*, Report 102, 2000; Industry Commission in *Urban and Regional Trends and Issues*, Economic Planning Advisory Council, Council Paper No.46, 1990; National Road Transport Commission *Updating Heavy Vehicle Charges - Technical Report*, 1998

¹⁴ Bureau of Transport Economics, *Urban Transport - Looking Ahead: Information Sheet 14*, 1999

¹⁵ Economic Planning and Advisory Council, *Urban and Regional Trends and Issues – Council Paper No. 46*, 1991, pp31,32

More recent analysis on the cost of transport externalities in Western Europe undertaken by the University of Karlsruhe indicates that these costs in Europe are in the order of 7.8% of GDP, excluding congestion costs, but including the cost of the impact on climate change. This is approximately 25% higher than the estimate of the cost of road transport externalities in Australia indicating that these costs may be underestimated in Australia.

The \$31 billion in external costs of road transport each year plus the \$5 billion in automobile industry subsidies costs every Australian \$1800 per year, over 40 times the cost of operating urban rail services.

Reallocation of federal funds from car subsidies and urban freeways to urban railways would significantly improve the liveability of our cities by providing a long term, sustainable solution to urban traffic congestion and the high costs of road transport.

Urban Air Pollution

Subsidies to motorists are endangering the liveability of our cities and the health of city residents. Over half of urban air pollution in our cities - carbon monoxide, lead, nitrogen oxides and ozone and other particulates - is caused by motor vehicles. Motor vehicles in urban areas cause¹⁶:

- 85% of carbon monoxide that causes heart ailments
- 97% of air-borne lead that causes brain damage, particularly in young children
- 63% of nitrogen oxides that contribute to asthma;
- ozone and other particulates that cause smog

The adverse effects of exposure to urban air pollution are apparent from a Swedish study of 3,500 Stockholm men over a 30 year period. The study, released in July 1999, found that 10% of the men who were exposed to heavy traffic fumes had a 40% higher chance of developing lung cancer.¹⁷

Measures to reduce car use in urban areas in order to improve air quality are consistent with overseas trends. In Italy, for example, 14 cities, including Rome, Florence and Milan, have now decided that the only way to tackle urban air pollution is to aggressively confront the cause – ban cars. Cars will be banned from the centres of these cities every Sunday in a concerted attempt to reduce smog that kills thousands of people every year and destroys ancient monuments.¹⁸

A recent report by the California Environmental Protection Agency published in the February 2002 British medical journal, *The Lancet* found a strong link between smog and asthma.¹⁹ In Australia, asthma kills up to 500 Australians each year and costs the community \$750 million per year in illness and lost productivity. Two million Australians have asthma including two in five primary school children. It is the leading cause of childhood admission to hospital.

Given that Australia has one of the highest rates of asthma in the world, it may be that our car dependence is bad for our health.

Recent research in New Zealand by the National Institute of Water and Atmospheric Research found that vehicle pollution caused a hidden road toll of around 400 people per year, almost as many as were killed in crashes.

In Europe, the situation is worse with the World Health Organisation finding that pollution from cars kills more people than the road toll each year.

No amount of clean fuel, improved fuel efficiency or exhaust filters will improve urban air quality as effectively as reducing the amount of traffic on our roads to reduce fuel consumption and air pollution.

Investment in urban rail rather than subsidies to motorists will improve the health of our cities.

¹⁶ Victorian EPA, *Draft Air Quality Improvement Plan, 2000* and ABS 4605, pp86-93

¹⁷ *The Australian*, 2.8.99,

¹⁸ *The Age*, 14.1.00

¹⁹ *Asthma in exercising children exposed to ozone: a cohort study*, *The Lancet* Volume 359, February 2002

Other costs

The New Zealand Ministry for the Environment²⁰ has determined that the impact of transport on the environment is far wider than has been traditionally considered. Transport has wide environmental effects beyond air pollution, noise, greenhouse gas emissions, land use and road congestion.

Other factors to be considered include:

- vehicle contaminants including runoff from roads, petrol stations etc
- contribution of transport to landfill and waste recycling eg disposal of tyres or old cars
- migration of pests and diseases along transport corridors

Inclusion of these additional costs in transport balance sheets would see the cost of both rail and road transport increase. However, the contribution of rail transport to these costs is significantly less than for road because:

- rail corridors require less land than roads with fewer ancillary facilities eg petrol stations, car yards
- rail vehicles last considerably longer than road vehicles, so contribute less to waste
- rail vehicles do not produce the quantity of waste that road vehicles do - tyres, vehicle bodies, engines, etc
- road transport can transfer pests and diseases quickly and easily because of transfer of contaminated soil on tyres

These costs of road transport would all be reduced by significantly improving the quality and scope of Australia's urban rail networks.

By any objective measure, road users are not paying their way, particularly for the adverse health effects of excessive car use in urban areas.

Job Creation

Employment in the automobile industry is unsustainable. At a Greenpeace Conference in London in October 2000, the Chairman of the Ford Motor Company said that the 100 year reign of the polluting internal combustion engine was coming to an end²¹. The implication is that more investment is required in new technologies.

Automobile assistance schemes overlook the opportunity to create employment in 21st century industries such as clean energy production, intelligent transport technology, sustainable transport systems and a wide range of other industries. Investment in these industries would create a strong employment base that would absorb employees displaced from the motor car industry due to declining subsidies.

Investment in Australia's rail industry, for example, creates highly skilled employment, supports regional and rural economies and provides an efficient and environmentally friendly alternative to road transport. It creates long-term sustainable jobs in the design and manufacture of equipment for domestic and overseas markets. Jobs are also created in track construction and maintenance and operation and maintenance of rollingstock and other facilities.

Investment in rail creates sustainable jobs in an environmentally friendly industry.

Conclusion

Our cities can no longer afford 1960s road based transport solutions supported by huge subsidies to the car industry that reinforce car dependency. Current transport and land use planning policies supported by subsidies to motorists perpetuate low density, car based urban sprawl.

²⁰ New Zealand Ministry for the Environment, *Proposals for indicators of the environmental effects of transport - Signposts for Sustainability*, 1999, pp13,14

²¹ *Canberra Times*, 7.10.00

Urban rail services provide immense benefits to our cities each year by reducing the amount of congestion, pollution, accidents, noise, land use and greenhouse gases attributable to motor cars.

These are benefits that flow through to the whole community, not just public transport users.

Car use has increased in our cities because people increasingly have no choice but to drive. Choice has been removed by subsidies to the car industry and decades of uncoordinated land use and transport planning decisions.

Increased government commitment to Australia's urban rail systems would improve the health and liveability of our cities while creating sustainable jobs.

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