

Submission to Infrastructure Australia re Major Cities

- 1 Adelaide Urban Corridors Strategy
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3. Melbourne Urban Corridor Strategy
4. Sydney Urban Corridors Strategy
5. Sydney Wollongong Corridor Strategy (existing passenger line only)

Introduction

The accompanying submissions were made during 2006-07 to various AusLink draft urban corridor strategies and were based on research conducted at the University of Wollongong. This research was supported, in part, by the former Cooperative Research Centre in Railway Engineering and Technologies (Rail CRC Project 24; rail transport energy efficiency and sustainability - 2002-2006). In respect of Queensland and South Australia, input also arose from earlier consulting for the respective governments. However, the views and research findings are the responsibility of the writer.

It is understood that earlier in 2008 the Rudd government released the 2007 revised corridor strategies. In some cases, the revised strategies address certain issues raised in submissions in the draft strategies. It is suggested however that three issues warrant more attention in consideration of all candidates for Building Australia funding. These are:

- * consideration of all external costs,
- * reduction of carbon pollution, and,
- * reduction of dependence upon imported oil.

External costs are conspicuous by their absence in many of the 2007 draft reports. This is despite the attention given to external costs as part of AusLink project assessment in the *National Guidelines for Transport System Management In Australia* released in 2004 by the Australian Transport Council. A second edition was issued in 2006. As these guidelines (at auslink.gov.au) "*focus on land transport and provide a standard framework, including processes, methods and tools to assist and guide transport planning and decision-making across Australia*" it is reasonable that external costs be fully taken into account in formulating recommendations for the funding of major projects.

Since 2006-07, the case for reducing dependence on imported oil has been strengthened due to oil prices trending upwards. The lack of detailed attention to oil vulnerability is a major deficiency in the revised 2007 corridor strategies.

Given rail's superior energy efficiency to road vehicles in moving freight and passengers, it is suggested that more attention should be given to rail prospects that have

demonstrated capacity to reduce dependence on imported oil. This will have the added benefit of not only reducing air pollution but also greenhouse gas emissions.

Since writing these submissions, Adelaide's tramline has been extended and a commitment was made in June 2008 to urban rail electrification. Brisbane and Melbourne have also made progress in improving their urban rail systems with large increases in patronage. In addition, both Queensland and Victoria are making good progress in improving intercity rail passenger services.

Despite the Clearways programme and its somewhat limited Epping Chatswood Rail network, Sydney faces major rail challenges. Important "Action for Transport 2010" programmes officially announced in 1998 including improving the slow transit times for Sydney - Newcastle and Sydney - Wollongong train services are yet to start. It is doubtful that Sydney's North - West would be well served by a metro in place of extension of the conventional heavy-rail network.

Perth The omission of a submission on Perth was due to the fact that this city was then moving towards a world-class urban rail transport system, with the expected completion commissioning of the Perth to Mandurah railway, supplemented by busses and good ticketing. Perth is remarkable in that in the early 1980s there were less than 7 million passengers per year using the rail service, which was destined for closure and replacement by buses. However, following reinstatement of a closed service (to Fremantle), electrification at 25,000 volts AC and construction of the Northern Suburbs Railway (NSR) in 1993 (subsequently extended) there were nearly 36 million passengers.

Following completion of the Southern Suburbs Railway between Perth and Mandurah in December 2007 at a cost of some \$1.6 billion, Perth's urban passenger railways extended to 172 route kilometres as against 48 kilometres in 1980. During the weekday peaks, there are six trains an hour each way on the 71 km Perth-Mandurah line travelling at speeds of up to 130 km/h, with some taking as little as 48 minutes. This compares favourably with a 70-minute journey by car, and in other states (particularly New South Wales).

The major expansion of rail services is a remarkable change in a heavily car dependent city. This type of investment, more so than "Fuel Watch", is needed in the other major cities in Australia.

1. ADELAIDE URBAN CORRIDORS

This strategy is of interest because it is the first AusLink strategy focussing on an urban area. This short response (October 2006) is supplemented by a May 2006 submission for the government of South Australia that appears in Appendix A.

The draft strategy is correct in identifying deficiencies in rail infrastructure condition and configuration, including gauge issues.

However, reference could usefully be made to the potential for rail electrification of the urban system along with possible gauge standardisation and extension. The Perth experience is that selective extension, upgrading and/or electrification of an urban rail system will result in a significant increase in patronage. The Adelaide diesel electric multiple units will not last forever, and Adelaide would benefit from modern high voltage (25,000 volts AC) electric multiple units.

There is also scope for grade separation of freight and passenger lines at the Torrens and Goodwood Junction. Such grade separation, including the location where the Noarlunga line leaves the Adelaide Hills line and crosses the standard gauge line, would assist both freight and passenger movements.

Trams, and their extension, could be possibly viewed in a more favourable light than simply causing delays to road vehicles and vice versa.

Parking and parking charges are briefly mentioned in the draft strategy. It could also be noted that Adelaide (like Brisbane) is in contrast to most mainland State Capital cities (Sydney, Perth and now Melbourne) where their respective State Governments are now imposing parking levies.

As per previous submissions on other corridor strategies, the strategy would be enhanced by acknowledgement of external costs of moving both freight and passengers. Some estimates for the cost of health costs due to air pollution from motor vehicles are given in Appendix B.

Attention is also warranted for the likely changes that would be forced on Adelaide's urban transport should oil prices continue to trend upwards. Oil vulnerability should be taken more seriously in a report that looks out to the year 2030.

2. SUBMISSION RE BRISBANE URBAN CORRIDORS STRATEGY

The short response (April 2007) is supplemented by appendices that are available on request.

The Brisbane Urban Corridors Strategy draws on the SEQ Regional Plan. The strategy draft notes the high level of population growth and a strong economy. Future SEQ population growth (increasing by about one million people by 2026 to up to 3.9 million people), economic growth (2.5 to 3.0 per cent per annum) and strong freight growth (up to 5 per cent pa) will, as noted, pose a 'significant challenge' for the transport network.

Future transport outcomes will be subject to the External factors noted on Page 18 including (vehicle) demand management measures that may (should) include *'tolls and road pricing to influence transport choices.'*

Brisbane transport has improved in recent years with the assistance of the Queensland Government (which is mentioned many times in the strategy) and the Brisbane City Council (which rates only two mentions plus a footnote even though it is a major bus operator). Limited federal assistance to roads, and earlier federal funding (1974-96) for public transport, has also assisted Brisbane transport. Initiatives of note include Australia's first high voltage rail electrification at 25,000 volts AC in 1979, Roma Street rail station and transport interchange, bus ways and bus lounge, and the Goodwill Bridge (for pedestrians and cycles) plus the Schonnel Bridge (for pedestrians, cycles and buses) over the Brisbane River. Although recent improvements have been made to roads, buses, ferries and trains, Brisbane roads are increasingly congested. The new River city motorway and the Hales Street Bridge, if it proceeds, is likely to increase road congestion in other locations. Road congestion, as reported to CoAG on 13 April already costs Brisbane \$1.2 billion a year. As noted (page i) *"... peak hour congestion on parts of the road network that impacts on travel time, reliability, efficiency, safety and amenity."*

Despite significant advances in rail and bus services. Brisbane now attracts both national and international attention as a city where:

- a) Brisbane road vehicle users enjoy a generous 8+ cents per litre fuel subsidy.
- b) Unlike Sydney, Melbourne and Perth, Brisbane is yet to get a CBD parking levy.

Both of these special Brisbane features at least rate acknowledgement in the final strategy. There is a good case for phasing out the Queensland Fuel Subsidy Scheme payments, at least in South East Queensland. In addition, a CBD parking levy is **long overdue** for Australia's third largest city.

Congestion pricing does not appear to be mentioned although it is noted on page 11 of the 2004 Auslink White Paper. Some notes appear in Appendix B.

A further factor is the severe constraints on rail operations to the north, west and south of Brisbane. These factors are noted in Appendix A and in summary form in Appendix C. To cater for the projected growth of freight, there is a need for improved separation of freight and passenger trains. There is also a case for expansion of the Brisbane urban rail network.

Air pollution warrants more attention in the final strategy. The draft strategy notes (on 34 with a brief reference in 'At a glance') *"Increased vehicle numbers will also present environmental issues, including air and noise pollution, especially as the incidence of congested conditions increases."* A BTRE (2005) Working paper *Health Impacts of transport emissions in Australia* gave a mid-range estimate of the annual health related costs from air pollution from motor vehicles in Australia's capital cities which was \$2.33 billion for the year 2000. This included \$295 million for Brisbane (see Appendix D).

As per earlier submissions on other AusLink corridor strategies, the Brisbane strategy would be enhanced by acknowledgement of external costs of moving both freight and passengers. The 2006 Brisbane - Cairns corridor strategy considered future rail freight demand and three scenarios were examined:

- Base case – rail captures 95% of its current mode share,
- Market defence – rail captures its current mode share, and
- Rail growth – rail captures 105% of its current mode share.

There is scope for scenario modelling for the likely investment costs, external costs, and oil use for various scenarios for Brisbane urban corridors.

Oil vulnerability appears to receive no mention of the draft strategy. Attention is also warranted (perhaps in 'External factors' on Page 18) for the likely changes that would be forced on Brisbane urban transport should oil prices continue to trend upwards.

Cycling and walking get the briefest of mentions (page 9 with public transport) in the draft report. They deserve more consideration in a sustainable urban transport context.

There appears to be no reference to transport induced greenhouse gas emissions in the main report and there is none in the summary "at a glance". Given the increasing interest in climate change, the potential need to reduce such emissions could at least be noted as a further 'External factor'.

3. SUBMISSION RE MELBOURNE URBAN CORRIDOR STRATEGY

This short submission is supplemented by Appendices, available on request.

This strategy is of interest because it is focussing on Melbourne which is Australia's industrial heartland and second largest urban area.

The draft strategy is correct in identifying deficiencies in rail infrastructure, including gauge issues (numerous references) and the inner west rail corridor (p22 and 23). The assessment on page 18 that *"Future investment in rail infrastructure will be assisted by the recent in-principle decision of the Victorian Government to buy back the inter-regional freight network."* is supported. Appendix B has comment re rail gauge issues.

As noted on page 18 of the draft strategy *"Nevertheless, the continued growth of Melbourne's population and economy through to 2030 necessitates investments being made on sections of the road and public transport systems to alleviate congestion pressures."* Congestion is frequently mentioned in the draft strategy as is demand for transport capacity. However, travel demand management did not seem to rate a mention (despite being noted in page 11 of the 2004 AusLink White Paper), but would appear to be important as road vehicle usage increases.

Parking and recently introduced parking charges are do not appear to mentioned at all in the draft Melbourne strategy (although their possible introduction rated a mention in the draft Adelaide strategy). Appendix C of this submission includes some notes of a recent UK report of Sir Rod Eddington.

Effective strategies to deal with road congestion, including road pricing with a possible congestion charge at least warrant noting in the final strategy. Congestion pricing is noted in page 11 of the 2004 AusLink White Paper,

Trams rated four mentions in the draft Melbourne strategy. Melbourne's trams, and their recent extensions (including to Docklands as an innovative transport - land user package), could well be possibly viewed in a more favourable light than simply causing delays to road vehicles and vice versa.

Incidentally, a small part of Adelaide's tram line shares a road with other vehicles. Thus the sentence on page 14 and effectively repeated in the "At a glance" section that *"Uniquely to Melbourne, trams as well as buses share road space with commercial vehicles and passenger cars, making the road task more complex."* may need amendment.

"At a glance" then notes that *"Delays from low occupancy vehicles reduce capacity for freight and commercial traffic and lengthen travel times, especially in peak periods."* To this writer, the problem low occupancy vehicles are not trams but cars, and particularly driver only cars.

Greenhouse gas emissions from a major city such as Melbourne surely warrants some attention - since the Adelaide draft strategy was on exhibition there has been the Stern Report released in the Britain and a recent New South Wales Court decision requiring some attention in a mining development application to greenhouse gas emissions. There appears to be no reference to transport induced greenhouse gas emissions in the main report and there is none in the summary "at a glance". The Bureau of Transport and Regional Economics (BTRE) has issued numerous reports addressing measures to reduce Greenhouse gas emissions in transport.

Air pollution warrants more attention in the final strategy. The draft strategy notes (on 34 with a brief reference in At a glance) *"Increased vehicle numbers will also present environmental issues, including air and noise pollution, especially as the incidence of congested conditions increases."* A BTRE (2005) Working paper *Health Impacts of transport emissions in Australia* gave a mid-range estimate of the annual health related costs from air pollution from motor vehicles in Australia's capital cities which was \$2.33 billion for the year 2000. This included \$658 million for Melbourne (see Appendix D).

As per earlier submissions on other AusLink corridor strategies, the Melbourne strategy would be enhanced by acknowledgement of external costs of moving both freight and passengers.

Oil prices rate just one mention on page 12 of the draft strategy as follows *"Notwithstanding the recent rise in oil prices, the basic convenience of cars, urban sprawl and the decreasing real cost of cars make them an attractive mode of passenger transport."* Attention is also warranted for the likely changes that would be forced on Melbourne urban transport should oil prices continue to trend upwards. Oil vulnerability could well be taken more seriously in a report that looks out to the year 2030.

Cycling and walking do not appear to be mentioned in the draft report. They deserve some consideration in a sustainable urban transport context.

4. SUBMISSION RE SYDNEY URBAN CORRIDORS STRATEGY

This strategy is of interest because it is focusing on Sydney which is Australia's largest urban area and one of four 'world cities' in the Southern Hemisphere. This response (May 2007) to the draft strategy is complemented by Appendices (including an opinion piece 'Transport a challenge for the new NSW government' [and Federal Government] from Track and Signal April May June 2007 p 42 and 44) available on request.

The AusLink network within the Sydney region is noted on page iii as having a number of arterial roads and toll ways, plus rail lines limited to three interstate lines and one to Port Botany. The line to Wollongong, which is used to move steel, could usefully be included in the final strategy, as it is missing on both page iii and page 4 of the draft.

Congestion is frequently mentioned in the draft strategy as is the demand for transport capacity. For example page iv notes that "*The urban road network is congested on key corridors, primarily during peak periods due to a high volume of traffic demand for existing road capacity.*" The AusLink road corridors are noted (page iv) as requiring "*...additional capacity and demand management measures to alleviate [congestion]*" with "*Motorway and arterial road access and travel demand measures*" being rated as a one of six Key Challenges. The report as a whole, however, seems to be lacking in discussion of travel demand measures including congestion pricing or road pricing. This is despite congestion pricing being noted (p 11) in the 2004 AusLink White Paper and forming entire chapter of the report of the 2003 NSW Parry Inquiry into Sustainable Transport.

Sydney's parking charges that have been in place for some years do not appear to be mentioned at all in the draft Sydney strategy (although their possible introduction rated a mention in the draft Adelaide strategy). Appendix B of this submission includes some brief notes regarding congestion pricing.

Effective strategies to deal with road congestion, including road pricing with a possible congestion charge warrant some discussion in the final strategy.

Bus services, which move many people, rate several mentions in the draft Sydney strategy. Sydney's light rail and ferries appears to have been left out as have cycling, walking and improving train travel. All of these deserve some consideration in any strategy to limit road congestion. Western Sydney gets a only a few mentions in the draft report. Given that one in 11 Australians live in Western Sydney, more attention is warranted to this area.

Greenhouse gas emissions from Australia's largest city rates just two mentions the draft report, and in each case one sentence that includes air pollution. Both greenhouse gases and air pollution warrant attention in the final report, including in the summary "at a

glance". The Bureau of Transport and Regional Economics (BTRE) has issued numerous reports addressing measures to reduce Greenhouse gas emissions in transport.

The draft Melbourne strategy noted (with a brief reference in 'At a glance') *"Increased vehicle numbers will also present environmental issues, including air and noise pollution, especially as the incidence of congested conditions increases."* Such environmental problems are more of a problem in Sydney than Melbourne. Here, a BTRE (2005) Working paper *Health Impacts of transport emissions in Australia* gave a mid-range estimate of the annual health related costs from air pollution from motor vehicles in Australia's capital cities which was \$2.33 billion for the year 2000. This included about \$1 billion for Sydney (see Appendix C). As per earlier submissions on other AusLink corridor strategies, the Sydney strategy would be enhanced by acknowledgement of external costs in transport.

The draft Sydney strategy notes (page iv) re rail: *There are a number of rail commuter services at peak loading in the morning peak. Rail freight operations are constrained by priority for passenger services during peak periods and the limited number of train paths available at certain times of the day. In addition, the current import/export intermodal terminal network serving rail freight is near capacity and constrained by residential areas. Similarly, existing domestic intermodal terminals have a limited capability to expand to cater for longer and more frequent interstate trains.*

This comment is considered sound. However, there does not appear to be any sense of urgency to deal with the problems of catering for freight and passenger traffic on existing lines, and there is no appreciation of the need to expand the network, including to Castle Hill.

Sydney's [Kingsford Smith] Airport is mentioned frequently in the draft report. It is surprising to see no reference to either Bankstown Airport or the earlier and long standing proposals for a Second Sydney Airport.

The questions of oil vulnerability or higher petrol prices do not appear to be noted in this draft strategy - even when looking out to the year 2030. Attention is warranted in the final report to oil vulnerability and to the likely changes that would be forced on Sydney's transport should oil prices continue to trend upwards.

5 SYDNEY WOLLONGONG

Edited from a February 2007 submission restricted mainly to cars and urban passengers

a. Introduction

The draft Sydney Wollongong Corridor Strategy is helpful in identifying many issues relating to present and projected demands in moving people and freight between Sydney and Wollongong.

At the outset it is difficult to understand the omission of Rail Corp as one of the participants of a '*collaborative initiative*' that comprises DOTARS, the NSW Department of Planning, the NSW Roads and Traffic Authority (RTA) and the NSW Ministry of Transport. This omission is even more difficult to understand given that Rail Corp is both a track owner and train operator, whilst the RTA for its main part is not a road operator.

The demands on the existing road and rail network will be compounded by the further development of Port Kembla and an expected growth in the number of people commuting between Wollongong and Sydney and also between Wollongong and Campbelltown/Western Sydney. The projected "*rapid growth in corridor freight*" will also pose additional challenges.

In turn, this leads to the identification of a number of short term priorities. The draft strategy also notes that completion of the Maldon Dombarton line could play a future role. This would be as part of a Maldon Port Kembla railway.

The draft strategy identifies (p13) the Mount Ousley Road is already at capacity in the morning peak (AADT 34 500 in 2003 including about 5500 heavy vehicles), there is congestion at times between Heathcote and Jannali, and the rail line through Sydney cannot be used by freight trains for at least seven hours per day. These constraints will become more severe over time, with environmental and social impacts likely to be accelerated once cars commence to be landed at Port Kembla.

b. A road solution ?

If by design or accident it is expected that most growth in passenger and freight movements between Sydney and Wollongong will be accommodated by road transport, then major road investment will be required. The cost of this investment, along with the likely external costs should be addressed.

c. A rail solution ?

Alternatively, it may be decided that rail should be moving more people and freight. There is already a need for an improved passenger train services. ...

It is noted on page 13 of the draft strategy that *"Commuter journeys along the Illawarra rail line are already operating at close to peak capacity. When population growth is taken into account, the Illawarra rail line will reach critical levels before 2016 during the morning peak (between 7.30 am and 9.00 am at Central). More services may need to be provided during the off-peak periods in the longer term as well. This would necessitate either lengthening of existing South Coast trains or the provision of additional services, which will lessen the availability of freight paths in non-peak times."*

The final strategy could usefully mention that the May 2006 RailCorp timetable slowed down passenger trains. The extending of passenger train transit times in May 2006 appeared to be due to reasons of rail congestion rather than rail safety.

In addition, the option of less freight on rail and hence more freight on road is considered as worth avoiding due to the significant external costs.

One rail option is to further invest in the existing line, including the twice promised Waterfall -Thirroul route with a long tunnel or even partial realignment (absent from the draft, needs acknowledgement in the final report). The Waterfall – Thirroul route was quoted in a 2003 consultants report for the NSW Government as costing about \$1.4billion ± 30 per cent in a 2003 report. In addition, triplication (works in Brisbane and for the ARTC) or quadruplication (has appeal but is more costly) of the Hurstville – Sutherland line. This section of track will see more trains following duplication of Cronulla – Sutherland within a few years as part of “Clearways”.

Despite the overall intention of the AusLink process to take *“an integrated approach to road and rail issues”*, road issues rule. Indeed, of the 7 listed Short Term Priorities, 6 relate to road and only one relate to rail. This is despite the acknowledged seven hour curfew on rail freight movement on the Sydney – Wollongong line, and the May 2006 passenger timetable that extended passenger train transit times. These delays warrant acknowledgement in the final report.

It is submitted that a new Short Term Priority should be ***reducing freight train curfew time and passenger train transit times on the Sydney – Wollongong railway.***

This is considered to be more appropriate than *"Improving the competitiveness (or utilisation) for rail on the Moss Vale-Port Kembla rail line."*

P.G. Laird, University of Wollongong May 2006

A. Introduction

1. This submission will draw on research conducted at the University of Wollongong and supported, in part, by the Cooperative Research Centre in Railway Engineering and Technologies (Rail CRC). However, it does not necessarily reflect the views of either organization nor the Government of South Australia's Greenhouse Transport and Planning Reference Group (of which this writer is a member).

The basic point is that in moving urban passengers, rail on average is about twice as energy efficient as cars and in peak hour loadings, rail can be seven times as energy efficient as cars. As well, in the movement of line haul freight, rail on average is about three times more energy efficient than heavy trucks. Along with improving energy efficiency of road transport, appreciable energy savings with reductions in greenhouse gas emissions can be achieved with selected increased use of rail for moving passengers and freight.

2. In the first place, the Government of South Australia is to be commended for its efforts in dealing with limiting greenhouse gas emissions. This effort is even more welcome given the limited action of the Federal Government to date.

3. The real challenge in reducing greenhouse gas emissions is to actually implement measures that will lead to real results. To meet this aim will require measures to ensure that each sector, including transport, "pulls its weight". In turn, this will require specific goals and measurable targets to allow for effective monitoring. For transport, a challenging target could well include Adelaide having the lowest petrol use per capita than any major capital city in Australia.

Measurable targets were a specific commitment noted by the Secretary of the Department of Premier and Cabinet, Mr. McCann at the close of the climate change Summit held on 9 November 2005 at Adelaide. It would be helpful for the final strategy to spell out the targets (or a range with a minimum and maximum) for each sector. In turn it will require measurement of various energy inputs, including petrol and diesel fuel.

4. The South Australia draft greenhouse strategy notes (p6) that although Australia greenhouse per capita emissions are amongst the highest in the world, South Australia's emissions (at 20.4 tonnes per person ?) are one of the lowest for Australia's states and territories.

As a real challenge, an explicit aim could be stated that the Government of South Australia will work over five (or even three) years to ensure that **South Australia's emissions per capita will be the lowest of all Australia's States and Territories**. This would match South Australia's unique (in Australia) beverage container legislation with its commendable results.

B. Land transport pricing

5. Five specific "no regret" measures were identified by the Federal Bureau of Transport and Regional Economics (BTRE) to reduce Greenhouse gas emissions in transport in 1996. The BTRE (*Greenhouse policy options for transport 2020* Report 105) revisited the issue in 2002. This report included some 11 groups of measures to reduce vehicle kilometres travelled (VKT), nine measures to reduce emissions per VKT, and four road pricing measures (mass-distance charges for heavy trucks, tolls, internalising transport externalities and emission charging), carbon taxes and tradable permits. Optimal road pricing was held to offer the best way forward to reduced greenhouse gas emissions.

6. The Secretary of the Australian Treasury, Dr Ken Henry (in an address to the ATRF and BTRE Colloquium in October 2002 accessed at www.treasury.gov.au) noted that interstate kilometres travelled could grow by something like 75 per cent over a 15 year period. *"Urban car traffic is likely to grow at a much slower rate by about 20 per cent over 15 years, or 1.2 per cent a year. Including urban commercial traffic, the figure is likely to be more like 23 per cent. Even those apparently relatively modest rates of growth in urban traffic raise important issues, especially of urban congestion and, of course, urban air quality. And truck traffic projections raise questions about the capacity and quality of maintenance of our highways. **Not dealing with these issues now amounts to passing a very challenging set of problems to future generations.**"*(emphasis added)

7. The decision of the Australian Transport Council (2002) to adopt a National Strategy for Lowering Emissions from Urban Traffic is of note. This strategy includes *"...programs that encourage people to take fewer trips by car' and transport 'from predominantly fixed to predominantly variable costs [to ...] ensure that transport users experience more of the true cost of their travel choices.'*

8. It is recognised that the Government of South Australia may be under pressure not to introduce parking levies in Adelaide (as per NSW, WA and Vic). However, unless road pricing is improved, commendable initiatives such as "Travel Smart" and making Trans Adelaide services more attractive to users will be of reduced effectiveness.

9. The view that road pricing needs addressing was shared by the Parry Inquiry into Sustainable Transport (NSW Ministry for Transport, 2003). Their report noted, inter alia (p72) *"The thinking underlying the support for road use pricing is that road access is currently 'too cheap' (as distinct from the general cost of motor vehicle use), as motorists are not directly bearing all of the costs associated with their decision to make a journey. For example, driving a vehicle is associated with costs such as congestion, road wear and tear, pollution and accidents."*

The Parry Inquiry (loc.cit, p 74) also noted *"Currently, public transport is disadvantaged compared with private transport by a range of taxation (for example, the fringe benefits tax), expenditure and other policies that encourage private transport use. As a separate issue, and irrespective of the decision made regarding road use pricing, those policies that distort decision making in favour of private transport should be reviewed to ensure that public transport is not disadvantaged."*

10. As well as bringing in parking levies for Adelaide, road pricing initiatives affecting urban transport could include reducing annual registration charges for compact cars and

hybrids, and increasing such charges for the larger four wheel drives or sport utility vehicles.

C. Rail transport infrastructure

12. The investment to upgrade tram services and extend tram track in Adelaide is commended. However, upgrading (with possible gauge standardisation) and extension of Adelaide urban rail system (to South Noarlunga) is now over due.

13. Early consideration should be given urban rail electrification. The Perth experience is that following selective extension, upgrading and/or electrification of an urban rail network, patronage will significantly increase. This is illustrated by the graph below which also contrasts rail patronage in Adelaide and Perth between 1991 and 1997. It is of note that patronage of each system has shown some recent increases.

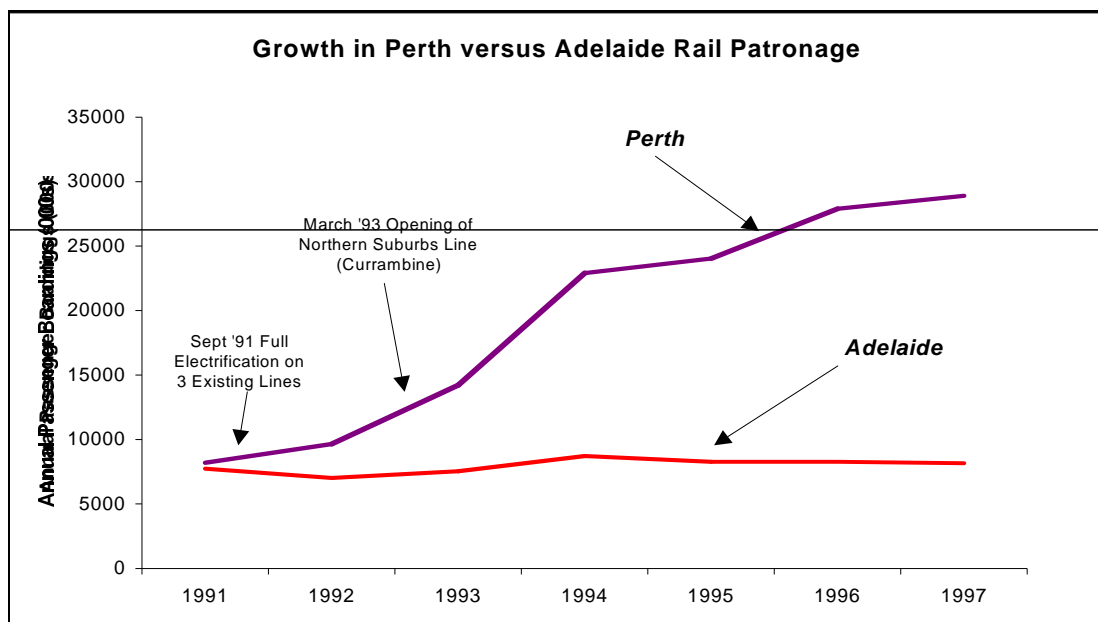


Figure 1 Perth and Adelaide rail patronage, 1991-1997.

Reference: Newman et al Chapter 3, p58 Laird, P Newman, P Bachelors, M and Kenworthy, J (2001) *Back on Track: Rethinking transport policy in Australia and New Zealand* UNSW Press, Sydney

14. During the early 1990s, Perth rescued and revitalised its urban rail system with electrification and extension to its Northern Suburbs. There has been a three fold increase in patronage over the last decade to over 30 million passengers a year. The system is now been extended to Mandurah, south west of Perth with 71.5 km of new track. By 2011, annual urban rail patronage is expected to reach 60m (Martinovich, P (2002) *The Perth urban rail development project* Conference on Railway Engineering, Wollongong, Proceedings pp 449-460). The new line is currently due to open by July 2007.

APPENDIX B Metro health costs - PM 10 basis

The Bureau of Transport and Regional Economics gave estimates of vehicle use and PM 10 emissions for the year 2000 in Australia's metro areas from various classes of motor vehicles (cars, Light Commercial Vehicles (LCVs), rigid trucks, articulated trucks, buses and Motorcycles (MCs)) for each capital city. These costs are summarised in Table B.1. The BTRE (2003b) estimates of health costs air pollution costs are given in Table C.2 along with estimates of PM 10 emissions.

Table B1 Estimates of health costs and metro PM10 emissions

City	Health costs (\$m)	Thousands of tonnes of PM10 in the year 2000					TOTAL
		Cars	LCVs	Rigid Trucks	Artic. Trucks	Buses	
Sydney	1036	2.135	0.888	1.048	0.277	0.275	4.64
Melbourne	658	2.078	0.553	0.823	0.249	0.194	3.91
Brisbane	295	0.826	0.349	0.367	0.12	0.134	1.81
Adelaide	162	0.617	0.182	0.191	0.072	0.084	1.15
Perth	153	0.74	0.343	0.314	0.134	0.107	1.64
Hobart	11	0.1	0.033	0.061	0.013	0.022	0.23
Darwin	7	0.039	0.031	0.034	0.013	0.02	0.14
Canberra	8	0.201	0.083	0.046	0.005	0.029	0.36
All Capital Cities	2330	6.737	2.462	2.885	0.883	0.865	13.88

Reference: BTRE (2005) Table 6.10 for health costs, and for PM10 emissions BTRE (2003c) Tables 3.9, 3.53, 3.75, 3.97, 3.116 and 3.136

The data in Table B2 is found by apportioning the health costs on the basis of PM 10 emissions in each State capital city for each class of vehicle in Table B1 and then dividing by the relevant estimate of vehicle kms. It is of note that the assigned average cost of health costs from car use in the state capital cities is 1.3 cents per kilometre. At an average fuel use of 11.3 litres of petrol per 100 km in the year 2000 (ABS, 2003), this equates to an external cost equivalent to about 12 cents per litre of petrol.

Table B.2 Estimates of health costs from metro fuel use apportioned by PM 10 emissions

City	cents per vkm in the year 2000				
	Cars	LCVs	Rigid Trucks	Artic. Trucks	Buses
Sydney	1.6	3.5	17.0	19.0	24.6
Melbourne	1.2	2.6	13.3	14.3	18.4
Brisbane	1.2	2.5	12.7	13.9	18.0
Adelaide	1.1	2.2	11.7	13.0	15.4
Perth	0.7	1.5	7.1	8.7	10.3
Hobart	0.3	0.7	3.6	4.1	5.3
Average of State Capital Cities	1.3	2.7	13.6	14.7	18.7