Supplementary submission to the Senate Rural and Regional Affairs and Transport References Committee
Inquiry into the Role of public transport in delivering productivity outcomes

Philip Laird, University of Wollongong, October 2014

Like the main submission of this writer sent in January 2014, this supplementary submission has drawn on research conducted at the University of Wollongong and in part addresses energy efficiency, road funding and fuel excise. However, the submission does not necessarily reflect the views of the University.

0. Summary of main submission

a. In the 30 years from 1974 to 2004, in 2004 values the Federal Government allocated $24.6 bn to the National Highway System with $58.0 bn on all roads, $2.2 bn to rail capital works, and about $1.8 bn to urban public transport.

It would be good to see the corresponding figures for the five year periods from 2004 to 2009, and then 2009 to 2014.

b. By 2010, road congestion in Australia's 8 largest cities was estimated by the Bureau of Infrastructure, Transport and Regional Economics to cost by 2020 in excess of $20 billion per annum. Urban road congestion is now running at a cost approaching one per cent of GDP and as such is a drag on our economy.

It is wishful thinking that road congestion in Sydney and Melbourne can be reduced by building more roads such as West Connex and the East West link. A combination of improved road pricing and better urban public transport would give better results

c. There is ongoing concern about climate change. The world scene in regards to oil supply and demand is also changing. The Senate Rural and Regional Affairs and Transport Legislation Committee 2007 inquiry report into Australia's future oil supply and alternative transport fuels had recommendations including: "… *that corridor strategy planning take into account the goal of reducing oil dependence ... Existing Auslink corridor strategies should be reviewed accordingly.*

d. Of Australia's five major cities, only Perth has a good urban rail system that has been expanded to meet growth areas including to Mandurah in 2007. Perth, assisted by smart cards for multimodal fare payment since 2007, now exhibits world best practice. Further upgrades would be assisted by the ongoing Federal funding of public transport.

e. Melbourne needs a metro, and more so than the East West motorway. A rail metro would follow the large Regional Rail Link project that provides about 90 kilometres of dual track from West Werribee via Sunbury to the Southern Cross Station in Melbourne. This $4.8 billion project was much assisted by federal funding of $3.2 billion.

f. Sydney, due to sustained past under-investment in rail, presents major challenges. Public passenger transport services include inter-urban rail services (eg Sydney-Newcastle) and may also be regarded as including intercity services such as Sydney

Canberra. The quality of these services including the all important transit time depend critically on track alignment and capacity questions.

g. Strong Federal government measures are now necessary to reduce oil use (and hence emissions) from moving people within major cities, and, between major cities and regional centres. These measures include investments in urban public transport in Australia's major cities, and to improve transport links between major cities and regional centres. In addition, improved road cost recovery is required.

1. Some May 2014 budget measures for transport and consequences

A joint May Budget media release by Deputy PM Truss and Minister Briggs notes a $40.8b infrastructure outlay between 2013-14 and 2018-19, with a further commitment of $4.5b budgeted for 2019-20 onwards. From this and other statements, Federal contributions for urban roads include:

* Sydney: $1.5 billion towards West Connex and a loan of up to $2b to accelerate delivery of a second stage. North Connex gets $405m and a 10-year road investment program of more than $3.5b for Western Sydney (in connection with a new airport) - all up $7.4 billion;
* Melbourne: Construction in two stages of the East-West link – $3 billion;
* Brisbane: Realignment, widening and upgrade of 11.3 km of the Gateway Motorway in Brisbane – $939m;
* Perth: A major upgrade of the roads around Perth Airport – $675m; and,
* Adelaide: North South road corridor – $944m.

The Federal contributions for non-urban roads include:

* Bruce Highway (Queensland): Over 10 years – $6.7b;
* Pacific Highway duplication (NSW): Completion of the upgrade of the Pacific Highway to a dual carriageway by 2020 – $5.64b; and
* up to $1.285b towards the Toowoomba Second Range Crossing in southern Queensland, a vital new link on the “national land freight network” to be delivered through a public/private partnership.

These road projects are in addition to funding for road maintenance, black-spot projects, the Heavy Vehicle Safety and Productivity Program, Roads to Recovery and untied local grants. The Commonwealth will spend $40b over six years on roads, of which around a quarter is likely to be new money.

What was left for rail was mainly for rail freight, with the two most expensive items being $300m for inland railway preconstruction works; and, $119.6m over five years to the Tasmanian Freight Rail Revitalisation Programme.

It is very clear from many commentators that the amount on offer for rail and public transport is only the start of what is needed. The harsher reality is outlined in the words of budget papers: *"Total expenses under the rail transport sub-function are estimated to decrease by 42.2 per cent in real terms from 2013-14 to 2014-15 and then decrease sharply each year thereafter (a decrease of 68.7 per cent from 2014-15 to 2017-18) reflecting the completion of projects announced in the 2009-10 Budget."*

It is not just the completion of projects such as Victoria's Regional Rail link that is the cause of a sharp decrease in federal funds for rail. The rail items cut from 2014-15 and forward estimates included:

The Melbourne Metro ($3 billion)
Brisbane's Cross-River Rail Project ($715 million)
Perth Airport rail line and light rail ($500 million)
Adelaide's Tonsley Park public transport project ($31 million)

All up, nearly $4.25 billion has been cut from urban rail. In addition, the former High Speed Rail (HSR) Advisory Group was abolished. As well, there are now unfunded ALP pre-election commitments to spend $50m on advancing HSR and a further $50m towards advancing completion of the Maldon Dombarton rail link in NSW.

1.1 Caution of more federal funds for roads

As noted below in Section 1.6, roads have been generously funded by the federal government in recent years. Road proposals should be sound enough to stand on their own merits, deriving all funds from road users, whilst leaving some funds from road users to cover significant external costs and to provide some funds for transport alternatives to roads.

In addition, it is desirable for federal funding of land transport to be used in a way that reduces dependency on imported oil. This will NOT be done by building more roads.

During 2011-12, cars, buses and trucks used nearly 32 billion litres of petrol, diesel, and LPG (Australian Bureau of Statistics, *Survey of Motor Vehicle Usage for 12 months ended 30 June 2012. Cat. No. 9208.0* at abs.gov.au*)*. By way of contrast, rail used 1.67 billion litres of diesel (or its equivalent in a year for a smaller passenger task but a larger freight task than road (please link to Australasian Railway Association Australian Rail Industry Report 2013 at ara.net.au). This reflects the fact that rail is much more energy efficient than road transport to move people and freight.

1.2 An international view

A mid 2014 United States report examined energy efficiency in 16 OECD countries on the four fronts of national efforts, buildings, industry and transport. The 2014 ACEEE International Energy Scorecard (via http://www.aceee.org) is based on points awarded for 31 key metrics using OECD, International Energy Agency and other independent data. On a combined policy and performance basis, Germany was ranked first, Australia tenth and Mexico last at 16th.

Regretfully, (page 16) *"One country in which a clear backward trend exists is Australia."* The report notes that this has occurred recently.

Moreover, in the transport sector, using 8 key metrics, Australia was ranked last (16th) with just 7 points out of 25. Of the 8 metrics, Australia scored zero points for each of three metrics: Fuel economy of passenger vehicles on both performance and the setting of future standards, and, for having no fuel efficiency standards for heavy trucks.

For each of four metrics including the use of public transit, and, investment in rail transit versus roads, Australia scored just one point each. Only in the metric "energy intensity of freight transport" did Australia get full marks. This score was assisted by the very high energy efficiency of the iron ore railways in the Pilbara region of WA.

Such a low ranking for transport energy efficiency policy and performance (the lowest of the 16 OECD countries surveyed) should act as an incentive for Australia to do better.

1.3 Oil Vulnerability

Road transport is highly energy intensive. Energy efficiency and oil vulnerability issues affecting the transport of people and freight are identified in many reports, including a report released 7 February 2007 of the Senate Rural and Regional Affairs and Transport Committee from the Inquiry into Australia's future oil supply and alternative transport fuels. The report noted that *" if there is a long term rise in the price of fuel, this will favour rail because fuel is a greater proportion of costs for road transport. This may suggest a need to increase the pace of catchup investment in rail infrastructure."*

In this regard, the 2008 Garnaut Climate Change review report noted (Chapter 21 'Transforming transport', p 503) that *"Governments have a major role in lowering the economic costs of adjustment to higher oil prices, an emissions price and population growth, through planning for more compact urban forms and rail and urban public transport. Mode shift may account for a quarter of emissions reductions in urban public transport…"*

If international oil prices continue to trend upwards, or even if they stay about the same as at present and the Australian dollar falls to levels of several years ago, Australians will be looking at petrol prices of $2 per litre. An increase in Australian petrol prices to $2 per litre will put a lot of pressure on existing public transport. This would likely result in an increased level of scrutiny as to past government failure to extend Australia's urban rail network.

The 2013 Queensland Freight Strategy recognised oil vulnerability as an issue. In addition, the topic was addressed in early 2004 by the NRMA in a commissioned report *Australia's Liquid Fuel Security Part 2,* which, inter alia, recommended improved public transport.

1.4 Some Australian views

By the late 1990s, Australia had excessive car dependency and the highest road freight, per capita in the world. In the late 1990s, both Engineers Australia and the Chartered Institute of Logistics and Transport gave considered warnings that cheap oil would not last forever, and more energy efficient transport was needed.

These warnings were followed in 2002 with one from the then Secretary of the Australian Treasury, Dr Ken Henry in an address to the ATRF and BTRE Colloquium in October 2002 (http://archive.treasury.gov.au/documents/440/PDF/Transport_Speech.pdf) about the very challenging problems posed to future generations on the projected increases in urban traffic and interstate road freight.

In 2004, oil prices were rising, yet there were government forecasts that oil could be expected to drop back to $US20 a barrel. However, by mid 2008, oil prices had peaked at about $146 per barrel. Following the global recession, oil prices have since receded and so petrol prices have been restrained at about $100 a barrel. They are expected to increase over the next decade.

A further reason for reform is the sheer amount of money spent on road transport. In the early 1990s, research commissioned by the Australian Automobile Association found that the total cost of road vehicle operations, including the fuel they use, buying and maintaining the vehicles, road works, road crashes and external costs was about 11 per cent of GDP. In 2013-14 terms, this is some $173 billion (http://www.rba.gov.au/inflation/measures-cpi.html). Due to fuel costs and road outlays increasing faster than inflation over the past 20 years, and growing road congestion, this estimate is conservative.

There are numerous hidden costs of road vehicle use. Including the cost of road crashes, environmental costs, health impairment from motor vehicle emissions, and foregone tax revenue, but not including road congestion, leading to leading to a "road deficit" of about 1 per cent of GDP.

Road congestion costs add a further 1 per cent or so of GDP. These costs simply cannot be reduced by building more roads.

The overseas experience is that a more balanced strategy, including rail, is needed to reduce road congestion. Here, as noted by Ross Gittins in the Sydney Morning Herald (SMH) for 14 August 2013: "The Coalition doesn't seem to have learnt what I thought everyone realised by now: building more expressways solves congestion only for long as it takes more people to switch to driving their cars."

1.5 Melbourne East West and Sydney Westconnex tollways

It is submitted that a sound business case for any of these expensive proposals has not as yet been made, and inadequate consideration has been given to a combination of improved road pricing, including time of day congestion pricing, and improved public transport.

The 2013 National Infrastructure Plan of Infrastructure Australia, within priorities under the transforming our cities theme, gave "ready to proceed" to the Brisbane Cross River Rail project, and "Threshold" to Melbourne's Metro. As well, within priorities under the international gateways theme, the East West Link in Melbourne (18 km of roads with some tunnels costing $6-8 bn but likely a lot more) rates "real potential" (third level) whilst West Connex favoured by the NSW Government and costing $10-13 bn rates just "Early stage" (fourth and lowest level).

1.6 A recent Australian report

Informed comment on our land transport policy (or lack thereof) has been provided in a recent report ***Spend more, waste more*** *Australia's roads in 2014: moving beyond*

gambling. The report, prepared for Infrastructure Australia was briefly placed on their website, and then withdrawn. It now may be found at the website (http://www.ycat.org.au) of the Yarra Campaign for Action on Transport who would much prefer a better rail system for Melbourne rather than the proposed East West motorway that could cost up to $1 billion per kilometre - that is $1 million per metre!

The latest report notes Australia's three levels of government and the private sector are now spending over $20 billion a year on road construction and maintenance; and, *"between 2008-09 and 2011-12, over $4.5 billion more was spent on roads than was raised in almost all road taxes and charges"* (from Bureau of Infrastructure Transport and Regional Economics Infrastructure Statistics Yearbook (2013) p.41).

After noting the need for reform in road pricing, including mass distance location for the heavier trucks, the report considers that the big annual outlay of roads, which is set to grow even larger at the expense of federal funding of urban rail, is a ***"road spend [that] can only be described as hideously inefficient."***

1.7 Some Pacific Rim urban rail advances

In the Asia Pacific region, metro rail systems are operational, under construction, or being planned.

One notable example is the expansion of the Shanghai Metro system which opened in 1995 with just one line. By 31 December 2013, with two new lines (12 and 16) recently opened, Shanghai had more than 500 km of track with 329 stations and that year had carried a record 8.9 million passengers. The current plan of the city of Shanghai is by 2020 to have total of 22 lines with a combined length of track of 877km. It is one of the fastest-growing and longest metro systems in the world.

Hong Kong has construction of metros being advanced on four fronts as well as completing a High Speed Rail link to China. Other cities in the Pacific Rim region such Vancouver have an expanding urban rail system, Macau is getting a new metro and a start on an underground rail link in Auckland is expected this decade. However, in Australia, we are falling behind.

1.8 Fuel excise

In July, the Senate Economics Legislation Committee held an inquiry into the Fuel Indexation (Road Funding) Bill 2014 and 3 related bills. The Government proposal to index fuel excise and divert all proceeds to roads is still before the Senate.

The issue of putting all extra revenue from fuel excise indexation into roads was raised in the 2014 inquiry of the Productivity Commission into public infrastructure. As seen by Consult Australia in a submission to this inquiry: "… revenue generated from a user-pays model should be hypothecated to transport infrastructure in the broadest sense, not restricted to roads. This point of difference is important and acknowledges that roads operate as part of the broader transport system, and that funding for public transport, rail, buses, light rail, trams, and active transport infrastructure will likely include significant flow-on benefits for road-users, principally through reduced congestion."

The submission goes on to note: “Overseas experience has demonstrated that public support for a user pays model will be assisted where modal shift is encouraged, and where that shift is supported by revenue hypothecated from the user charges into complementary infrastructure."

These views are supported.

Some form of compromise is now appropriate. The Government should be prepared to allocate at least surely half of the proceeds of an increase in fuel excise to urban public transport and minority parties should be able to accept half of the proceeds going to roads.

It is of note that most fuel consumed in Australia is by motorists driving in Australia's five largest urban regions (mainland capital cities and adjoining urban areas). All motorists in Sydney, Melbourne, Brisbane, Adelaide and Perth, and Canberra, have an interest in less road congestion and improved urban public transport.

2. Conclusions

A better balance between federal spending on urban roads and urban public transport than what is currently proposed is needed. Attention is also needed to road pricing. These measures would improve energy efficiency of urban passenger transport and reduce emissions along with reducing dependence on imported oil and reducing road congestion.

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