

## 2020 – 21 Pre - Budget Submission re land transport and related topics

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This submission is an edited, updated and augmented version of earlier pre-budget submissions that draws on research conducted at the University of Wollongong. However, the views expressed are those of a personal professional nature.

1. The need for investment in both roads and rail track continues. This is at a time that on the one hand Australia continues to have strong population growth along with an aging population and a need to respond to climate change impacts whilst on the other hand, the Australian Government remains under fiscal constraint.

The 2015 National Infrastructure Audit of Infrastructure Australia highlighted the need for Australia to respond to a growing population with increasing road congestion.

Australia's population now exceeds 25.5 million and there is a rail infrastructure deficit in Sydney, Melbourne and Brisbane as well as parts of regional Australia.

Infrastructure Australia's subsequent updated modelling estimates that road congestion and public transport crowding cost the Australian economy \$19.0 billion in 2016. Without continued infrastructure investment in our major, this report suggests this cost will more than double by 2031 to reach \$39.8 billion.

2. The BITRE *Yearbook 2019: Australian Infrastructure Statistics, Statistical Report*, notes, inter alia (Table T 5.5a Public transit patronage on heavy rail, Australian mainland state capital cities) that in 2017-18, there were 726.4 million passenger movements; also in 2003-04, there were 486.5 million passenger movements; an increase of about 49 per cent over 14 years that far exceeds population growth.

2.1 Between the 2011 and the 2016 Census, Greater Sydney's population (including Gosford) grew to 4.82m with a 10 per cent growth. During these five years, rail patronage on the Sydney and intercity network increased from about 304m to 367m with a stronger growth of some 15 per cent.

In the 12 months to end of April 2019, the combined Sydney and intercity patronage has continued to grow to over 401m

The busiest station Town Hall had 68m passengers passing through the station gates (plus some transferring trains) – up a hefty 23 per cent in 2015-16.

As noted Sydney Morning Herald for 8 January 2020 *Pressure points pile up for rail network* “Decades-old trains, passenger crowding, forecasts of a \$1.3 billion maintenance backlog and a surge in demand for services will heap pressure on Sydney's already stretched rail network as the city balloons to 6 million people over the next decade.”

“An internal government report, marked “Cabinet in confidence” and completed in September, warns of the need for the state government to inject even more funding into the backbone of the public transport system as an extra 1.4 million people are forecast to call the city home by 2031. The Sydney Trains report, obtained by the *Herald* using

freedom of information laws, reveals a backlog in deferred maintenance across the rail network is forecast to surge to \$1.3 billion by the end of the decade, from \$419 million last year, without a funding boost.”

2.2 Between the 2011 and the 2016 Census, the population of Greater Melbourne grew to 4.48 million – 12 per cent growth. During these five years, rail patronage on the Melbourne metro increased by 16 per cent. The numbers of people using Melbourne’s trains continues to increase. In 2017-18, there were 240m journeys, up a lot from the 130m in the year 2000. As *The Age* noted in 2018, train delays on some busy lines are increasing, and that “Despite Victoria paying billions of dollars to private operators over the past two decades in a bid to improve reliability, an ageing train network plagued by signal and equipment faults is straining under the weight of demand.”

Both cities have recently completed major rail projects – with Sydney gaining a new North West metro in April 2019, whilst Melbourne had a substantial (and ongoing) level crossing programme under way with a “new” 8km line to Mernda opening in August 2018.

Further major projects are now underway in both cities underway to increase capacity. However, even when the Sydney Metro Stage 2 and Melbourne’s Metro tunnel is completed, more work will be needed to address both past under-investment and population growth.

2.3 Brisbane needs a 10.2 km Cross River Rail project from Dutton Park to Bowen Hills, with 5.9 km in tunnel to include five new stations. The Queensland Government has committed funds to the \$5.4 billion project and some Commonwealth funding, comparable to that provided for major roads in Queensland, is needed for this project.

Perth’s urban rail system is now arguably the best in Australia and has attracted international attention.” However, ongoing improvements in Perth’s public transport and are needed contain road congestion and its negative impact on productivity.

Adelaide’s rail electrification programme could well be revived. The work to date has helped lift patronage.

In all major cities, there is an ongoing need for more separation of freight and passenger trains.

3. The growth of light rail in Australia is of note. This includes the Gold Coast with patronage far exceeding expectations when Stage 1 was opened in July 2014 and Stage 2 was opened in early 2018. The BITRE *Yearbook 2019: Australian Infrastructure Statistics, Statistical Report*, notes, inter alia (Table T 5.5b Public transit patronage on heavy rail, Australian mainland state capital cities) that in 2017-18, there were 235.4 million passenger movements; also in in 2003-04, there were 149.7 million passenger movements; an increase of about 57 per cent, that far exceeds population growth.

4. The 2019 BITRE *Infrastructure Statistics Yearbook* notes that the urban rail passenger task for the five mainland state capitals grew from 11.6 billion pass.km (bpc.km) in 2009-2010 to 14.4 bpc.km in 2018-19; a solid growth of 24pc.

This far exceeds road passenger use (cars etc) for all capital cities going from 148 bpkm to 168 btkm over this time – a growth of some 13.5pc.

5. The clear evidence from overseas is that road congestion cannot be eased simply by building more roads.

It is of note that some Australian road investment has been called into question by the International Monetary Fund (IMF) as noted by the Australian Financial Review (AFR)<sup>1</sup> that Australia should be spending more on infrastructure, but this should be on rail, airports and seaports rather than roads; also Australia is spending only about half of the 0.4 per cent of GDP it should to each of rail and ports.”

It is suggested that current high outlays in roads by government at over \$30 billion per year could well be reviewed.<sup>2</sup> This level of expenditure was described by consultants to Infrastructure Australia in a 2014 report *Spend more, waste more* as a *"road spend [that] can only be described as hideously inefficient."*

Thus, projects such as Sydney's WestConnex that has now blown out to about \$17 billion and duplication by 2020 of the Pacific Highway (taken to task by Infrastructure NSW in its 2012 report<sup>3</sup>) could well be reviewed. In particular, Stage 3 of WestConnex and more recently the F6 extension has attracted much opposition and the City of Sydney has proposed alternative options.

The 2016 Federal budget drew a reaction from NAB Group Chief Economist Alan Oster of *"infrastructure spending that is still road heavy."*

The efforts made in the 2017, 2018 and 2019 federal budgets to have a more balanced investment in rail and road are noted with appreciation. This includes funding for an Inland Railway and for preliminary studies for Faster Rail to provide improved links between large capital cities and nearby regional cities.

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<sup>1</sup> AFR 21 February 2018 *"IMF says Australia has overspent on roads"* and AFR 21 February 2018 *"IMF finds \$112b shortfall in infrastructure"*

<sup>2</sup> Bureau of Infrastructure Transport and Regional Economics (BITRE) *Key Australian infrastructure statistics 2019* notes, inter alia, in TableT1.3 (p4\* Total road expenditure by all level of government, for 2017-18–17 for all governments, an outlay of \$30,249 million.

<sup>3</sup> In 2012, Infrastructure NSW [ p143 ] noted that due to the relatively low traffic volumes on the remaining sections, the economic merit of their reconstruction is much lower at 0.8 (Benefit Cost Ratio) than that of the Highway as a whole; also *"...given competing priorities for NSW and Commonwealth Government funds, the high cost and relatively limited benefits of these remaining sections raises questions ... appropriate scope of works and priority for those sections with relatively light traffic."*

There is a long overdue grade separation project at the foot of the Mt Ousley Highway in Wollongong which has at least three times the annual average daily traffic (over 53,000 including some 7960 trucks) than does ‘remaining sections’ of the Pacific Highway.

However, a concern remains with the sheer amount of government money that is allocated to road projects, despite the lack of true user pays pricing for road use.

The situation of federal outlays between Brisbane and Cairns for land transport that results in billions to the Bruce Highway and little to rail<sup>4</sup> is also in need of review.

7. In December 2018, the NSW Government announced its intention to investigate the upgrading of the main railway tracks from Sydney to Newcastle, Wollongong, Canberra Goulburn and Orange/Parkes, or, the construction of dedicated high speed track on these four corridors.

Whilst it can be argued that federal government has given NSW over \$4 billion for its share of the Snowy Mountains scheme and this could be applied to intercity rail in NSW (as suggested by former Prime Minister Turnbull in March 2018 when visiting Port Kembla), there is also a case for some federal funds for regional rail in NSW comparable to that already advanced/ committed to Victoria of about \$2 billion.

Regional New South Wales has a large infrastructure deficit and this will require significant funding to remedy. In 2012, it was noted<sup>5</sup> "As Newcastle and Wollongong grow in size and importance to the NSW economy, they need faster and more efficient links to Sydney."

In 2004, Prof Ian Gray<sup>6</sup> commented on regional passenger trains in New South Wales, and found appreciable scope for improvement, noting, inter alia, a lack of investment in New South Wales contrasted with "*Queensland, Victoria and Western Australia where governments have developed track and equipment to take advantage of late 20<sup>th</sup> century technologies...[and] straightening the track is essential to increasing train speeds.*"

7.1 As noted above, faster trains between Sydney and Newcastle are needed. The worst aligned sections of track linking Hornsby and Newcastle, including Fassifern to Teralba and the Cowan Bank are now overdue for realignment. This section is now one of the most congested sections of double track in Australia with both frequent passenger trains and commercial rail freight activity.

One simple strategy to speed up trains would be to revert to the alignment in place in the late 19<sup>th</sup> Century, with modest grade and curve easing of the original alignment. This would save about 3 km of point to point distance and reduce transit time by about seven minutes.

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<sup>4</sup> Australian Government funding for the Bruce highway now stands at \$10 billion whilst the Queensland Government has committed over \$2 billion of funding with no federal funds north of Nambour.

In May 2016 in the Courier Mail in Brisbane, an Engineers Australia Queensland infrastructure spokesman noted that huge numbers of trucks would be funnelled on to the Bruce Highway unless \$2.5 billion was invested in the railway.

<sup>5</sup> Transport for NSW 2012, Draft Transport Master Plan as noted by the 2012 State Infrastructure Strategy of NSW) Infrastructure NSW.

<sup>6</sup> *A future for regional passenger trains in New South Wales*, Local Government and Shires Associations of NSW, and Charles Sturt University

Other ways of speeding up Newcastle Sydney trains include higher speed turnouts at various locations, easing of tight radius curves, and the use of new higher powered trains. To achieve a two hours transit time, work will be needed on several fronts. For more details, for this and three other NSW lines, see the references below.<sup>7</sup>

Federal funding was advanced in 2018 towards a business case for an upgrade. Hopefully some federal funds can be allocated in 2020 to start an upgrade.

In addition, there is considerable scope for improvement in the Maitland to Brisbane line, on top of the work done by the ARTC in recent years. A case study of a major deviation between Hexham and Stroud Road was noted in a 2007<sup>8</sup> report by this Here, the construction of 67 km of new track would replace a substandard 91 km section to halve transit times and reduce fuel use by 40 per cent. A Hexham to Fassifern link (Hunter Valley freight bypass) would also give good benefits.

7.2 Wollongong station is some 83km from Central. The current average speed of about 55 km per hour for the fastest Wollongong - Central trains is too slow. Perth Mandurah and Geelong Melbourne trains average 85 km per hour. Reversion of a section south of Waterfall from a 1915 alignment to the 19<sup>th</sup> century alignment with modest grade and curve easing would reduce distance and save over 7 minutes of transit time.

7.2.1 A related issue for South Coast rail operations is completion of the 35 km Maldon Dombarton rail line, which was raised in a 2018 report "Regional development and a global Sydney" of the Legislative Council Standing Committee on State Development, whose Recommendations included (no17) *That the NSW Government explore options to bring forward construction of the Maldon to Dombarton railway line, and Blayney to Demondrille railway line, including seeking funding through the National Rail Program to develop a detailed business case for the construction of the links.*

This Committee in its report noted the South West Illawarra Rail Link (SWIRL) proposal released in August 2017 of the Illawarra Business Chamber, where "SWIRL would reduce substantially reduce travel times between Wollongong and Campbelltown, Wollongong and Liverpool and Wollongong and Leppington.

Further support during 2018 for completing the Maldon Dombarton link has come from the Committee for Sydney in its MegaRegion proposal. It is likely that some government funding will be required to facilitate the completion of this rail link.

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<sup>7</sup> Michell M and Laird P, 2016 *Thinking outside the fence line – Sydney to Brisbane* Conference on Railway Excellence, Melbourne

Laird P and Michell M, 2017 *Shorter south coast train transit times* AusRail, Brisbane

Laird P and Michell M, 2018 *Canberra Rail - to be or not to be* Conference on Railway Excellence, Sydney, Railway Technical Society of Australasia

Michell M and Laird P, 2019 *Speeding Up Nsw Main West Transit Times* AusRail Sydney

<sup>8</sup> House of Representatives Standing Committee on Transport (2007) *The Great Freight Task: Is Australia's transport network up to the challenge?* page 116.

7.3 A Sydney Canberra Higher Speed Train could be developed on an incremental basis with options as follows:

Stage 1 A new improved alignment between Goulburn and Yass with a spur line from Yass to North Canberra.

Stage 2 Track upgrades from Mittagong to Goulburn and for a Wentworth route between Menangle and Mittagong that could tie in with the Maldon Dombarton line.

Stage 3 Further upgrades to Campbelltown to Sydney.

Where possible, new construction should be to Higher Speed Rail (HSR) standards of trains operating at least 250 km/hr. An indicative cost<sup>9</sup> is \$3.5 billion.

A Sydney Canberra Higher Speed Train operating by 2025 at speeds up to 200 km/h on deviations and taking less than two and a half hours is quite feasible. This could be followed by more new HSR track and faster trains to get down to the former 1998 Speedrail target of 84 minutes, and later down to the 2013 Phase 2 HSR time of 64 minutes (which had an estimated cost of \$23 billion).

7.4 There is considerable scope for track straightening between Lithgow and Orange, mainly by following original disused alignments, as recommended by the Orange Rail Action Group (ORAG) in 2014.

In May 2019, a petition of the residents of the City of Orange and Region circulated by ORAG was tabled in the Legislative Assembly of NSW. The petition was signed by over 10,000 persons and this led to a debate of the issues on 20 June in the Legislative Assembly. It called for support and funding for --

- An early morning fast passenger train direct from Orange to Sydney and its return in the same afternoon;
- Rail infrastructure upgrades of the Main Western Line to support fast passenger rail and freight rail services; and,
- Early commissioning of the new Regional Rail Fleet on the Main Western Line.

8. **Rail corridors** In December 2016, the House of Representatives Standing Committee on Infrastructure, Transport and Cities released its report *Harnessing Value, Delivering Infrastructure*.

Much evidence was received and noted on the need to identify and protect corridors for future railway lines. The Committee noted, in part [p151] “*Corridor preservation, especially for major projects such as HSR is very important. The ability to protect corridors ensures that transport infrastructure will follow the optimum route. Failure to protect corridors will mean compromises in planning and significant increases in cost.*”

It is not just for HSR, but also rail freight and medium speed passenger rail that corridor protection is needed. A further indication of concern is that of Infrastructure Australia in its July 2017 report *Corridor Protection: Planning and investing for the long term*.

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<sup>9</sup> 2014 Michell M Martin S and Laird (2014) *Building a railway for the 21st century: bringing high speed rail a step closer*, Conference on Railway Excellence, Adelaide

The Infrastructure Australia report urges Australian governments to take urgent action in the next five years to protect vital infrastructure corridors, to avoid cost overruns, delays and community disruption when delivering new infrastructure. The paper shows that protection and early acquisition of just seven corridors identified as national priorities on the Infrastructure Priority List could save Australian taxpayers close to \$11 billion in land purchase and construction costs.

This writer would go further and submits that urgent corridor protection should now be accelerated with federal funding. Alternatively, federal budget sanctions could be used against State Governments who through “inefficiencies and obstruction” fail to do the right thing (to cite Leitch DB (1972) *Railways of New Zealand*, p51 re abolishing the provinces in 1876 and vesting all railway construction in the central government).

Identifying and protecting corridors for upgrading existing rail track and for new track could usefully receive federal funding could be done in a manner similar to the long standing federal funding of advanced planning of certain highway projects (such as the Pacific Highway in NSW).

In particular, rail corridors should be reserved for new railway lines to Melbourne’s Tullamarine airport, and, the new Western Sydney airport.

9. There is a need to invest more in urban and regional rail infrastructure at a national level. The additional funds required for such investment along with other federal government outlays may need reconsideration of taxation policies,

10. As reported by the Sydney Morning Herald on 5 September 2019, Reserve Bank governor Dr Philip Lowe called for a major spending program on infrastructure including rail, bridges and roads across Australia. He was quoted as saying: "Right at the moment there is limited capacity to do more mega projects in Sydney and Melbourne but there is capacity elsewhere in the country to do significant projects, and also capacity to do a series of smaller projects..."

"Part of infrastructure investment is actually maintaining road, rail, bridges right across the country. It has the other advantage of making sure infrastructure spending is spread across the country and not just centralised in Sydney and Melbourne. There is capacity in some areas."

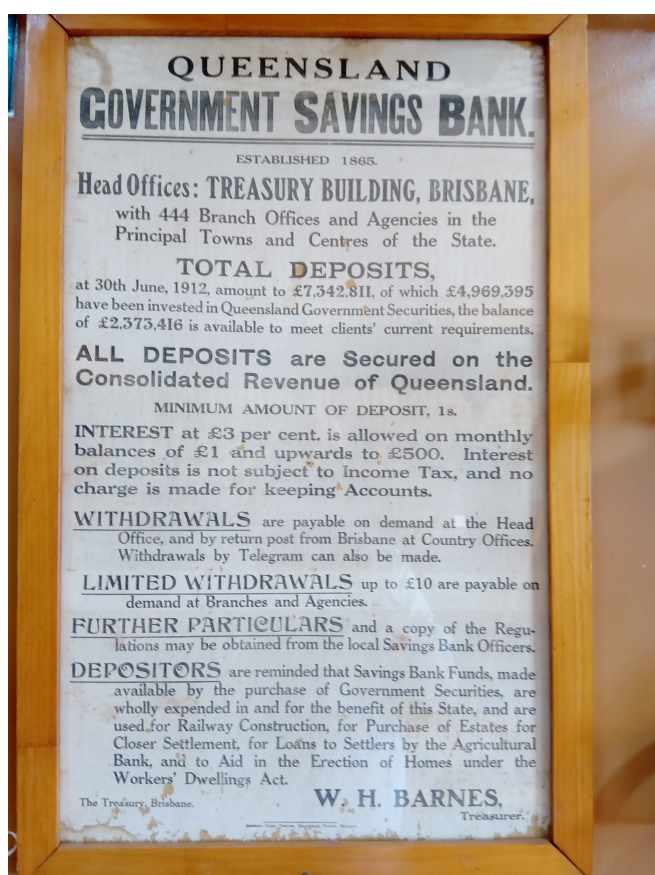
11. This call for more investment in infrastructure, on top of that announced by the later in 2019, has been supported by many other qualified commentators.

It is submitted that Australia needs some action like that taken by New Zealand government in December 2019 in its Half Yearly Economic and Fiscal update with an extra \$NZ12 billion over four years on a range of measures, to include more on roads and heavy rail, and \$NZ200m on "public estate decarbonisation.". As noted (New Zealand loosens fiscal belt to arrest economic slowdown, AFR 12 December), now is “the right time to take advantage of low interest rates and ‘future-proof’ New Zealand with stimulatory spending.”

As the NZ Treasurer, the Hon Grant Robertson was quoted “I think it would be ludicrously stubborn to not respond to the fact that there is an infrastructure need.”

12. A further option is offering infrastructure bonds to members of the public. Many investors would welcome the opportunity to make a secure investment with reasonable returns.

In this regard, attention is given to the opportunities available to residents of Queensland in 1913, to invest in the Queensland Government savings bank, at 3% pa, with funds being expended in and for the benefit of this State, and are used for Railway Construction..." (and other purposes)



### Road Pricing

13. In 2009, the Henry Tax Review noted that "Current road tax arrangements will not meet Australia's future transport challenges."

The Henry Tax Review made several pertinent recommendations for road pricing reform. These included

**Recommendation 61:** Governments should analyse the potential network-wide benefits and costs of introducing variable congestion pricing on existing tolled roads (or lanes), and consider extending existing technology across heavily congested parts of the road network. Beyond that, new technologies may further enable wider application of road pricing if proven cost-effective. In general, congestion charges should apply to all registered vehicles using congested roads. The use of revenues should be transparent to the community and subject to further institutional reform.



**Recommendation 62:** The Council of Australian Governments (COAG) should accelerate the development of mass-distance-location pricing for heavy vehicles, to ensure that heavy vehicles pay for their specific marginal road-wear costs. Revenue from road-wear charges should be allocated to the owner of the affected road, which should be maintained in accordance with an asset management plan. Differentiated compliance regimes to enforce this pricing policy may need to be considered to balance efficiency benefits from pricing against the costs of administration and compliance for some road users.

**Recommendation 63:** States should improve compulsory third party insurance to better reflect individual risks.

**Recommendation 64:** On routes where road freight is in direct competition with rail that is required to recover its capital costs, heavy vehicles should face an additional charge on a comparable basis, where this improves the efficient allocation of freight between transport modes.

14. The need for reform in road pricing is attracting increasing attention in recent years. By way of example, although not a major focus of the 2015 Competition Policy Review, road pricing was considered. In part, the review noted in part that "... roads are the least reformed of all infrastructure sectors, with institutional arrangements around funding and provision remaining much the same as they were 20 years ago.

"More effective institutional arrangements are needed to promote efficient investment in and usage of roads, and to put road transport on a similar footing with other infrastructure sectors. Lack of proper road pricing leads to inefficient road investment and distorts choices between transport modes, particularly between road and rail freight.

"The advent of new technology presents opportunities to improve the efficiency of road transport in ways that were unattainable two decades ago. Road user charges linked to road construction, maintenance and safety should make road investment decisions more responsive to the needs and preferences of road users. As in other network sectors, where pricing is introduced, it should be overseen by an independent regulator."

15. In regards to congestion pricing, the initiative of Infrastructure Victoria in its 2016 30-year strategy in proposing an electronic congestion charging system for Melbourne is of note. This was introduced in Singapore in 1998, leading to a 16 per cent drop in peak hour traffic by the year 2000, whilst in London, a 2003 congestion charge saw car decreasing by nearly 20 per from 2000 to 2009.

16. In 2018, a collection of essays in a publication from ANU called ROAD PRICING AND PROVISION - CHANGED TRAFFIC CONDITIONS AHEAD is of note- see <https://press-files.anu.edu.au/downloads/press/n4353/pdf/book.pdf>

17. In October 2019, the Grattan Institute argued in a report that charging motorists for driving in and out of the CBD during peak hours would cut traffic by 40 per cent and increase road speeds by up to 20 per cent.

Although this approach, which is by no means new, was welcomed by some urban planners, economists and academics, the NSW and Victorian governments were too quick to rule it out.

Congestion pricing should at least be considered by the Australian Government.

It is of note that the option of a future congestion charge, as used in Singapore, London and Stockholm, has been explored by the New Zealand Government and the city of Auckland.

Road congestion in Auckland (current population 1.7m) was estimated to cost as much as \$3 billion a year, by business groups and the Mayor of Auckland.

18. Fuel excise is now being indexed on an annual basis. However, there was a long period between 2001 and 2014 when it was not been indexed, and was stuck at 38.143 cents per litre. The loss of Commonwealth revenue from freezing fuel excise indexation was estimated in Treasury Budget Paper #2 (May 2001) at \$150 million for 2001-02.

A Fuel Taxation Inquiry reported in 2002. Although its recommendations were pragmatic, they were rejected by the Government of the day. As noted in an earlier pre-budget submission: The difference in total fuel excise collection during 2011-12 for petrol used in cars etc between the indexed and frozen rate would have been about \$2.48 billion; also for 6.3 billion litres of diesel used by trucks during 2011-12, the forgone revenue from rebates was about \$1.9 billion. Accordingly, the combined forgone petrol and diesel excise during 2011-12 alone is estimated at about \$4.4 billion.

19. Fuel excise is currently 41.6 cents per litre (as of August 2019) but this is some 20 per cent less in real terms than what it was in the year 2000.

Along with consideration of congestion pricing there is a case for fuel excise in Australia to be increased by 10 cents per litre to allow for lower annual registration fees for cars; and, to fund ongoing calls for more money to be spent on roads, and alternatives to roads including rail, urban public transport and cycleways.

There is also a good case for scrapping the diesel rebate.

20. New Zealand has increased its petrol excise by appreciably more than 10 cents a litre since March 2002, and is currently 66.524 cents per litre allocated to the National Land Transport Fund. Annual registration fees for cars in New Zealand are much lower than in NSW and other states. A further 6 cents per litre is collected to be applied to motor accident compensation and in Auckland, a further 10 cents per litre is levied for regional transport. It is of note that higher fuel taxation has not stopped the New Zealand economy performing well.

17. Mass distance location charges for heavy trucks in Australia are long overdue. Incredibly, a National Transport Commission 2015 paper on road user charges, complete with nine options looking at pay as you go (PAYGO) methodology did not even raise the option of mass distance charges. This is despite Infrastructure Australia calling for a user-pays approach to provide greater fairness in the way Australia pays for its roads to include the introduction of direct heavy vehicle charging.

Meantime, aggregate revenue from truck registration fees and road user charges set in 2016-17 at a modest 25.8 cents per litre has been frozen until 2019-20 by Transport Ministers. This low road user charge for trucks is less the late 2019 (now indexed) 41.6 cents per litre on petrol and diesel for cars.

It is noted that the November 2019 Transport and Infrastructure Council meeting supported an increase of a 2.5 per cent increase be applied to the Commonwealth Road User Charge in 2020–21 with a further increase of 2.5 per cent in 2021–22 along with the roads component of registration charges in 2020–21 with a further increase of 2.5 per cent in 2021–22.

This is despite the National Transport Commission (NTC) estimating that to ensure governments recover the amount spent on providing roads to heavy vehicles in 2018–19, current heavy vehicle charges would need to rise by 11.4 per cent for 2020–21; and, the NTC's long standing approach to allocation of road system costs to heavy vehicles being found in 2006 by the Productivity Commission (it is report on road and rail access pricing finding the NTC's charges to be conservative.

19. New Zealand has had since 1978 mass distance charges for heavy trucks. Currently, and increased on 1 July 2019, a heavy semitrailer with six axles pays 58.9 cents NZ (about 56.5 Aust cents) per kilometre. In Australia, the same truck hauling 100,000 km a year or more pays registration and fuel road user charges working out to less than 17 cents per kilometre.<sup>10</sup>

If one accepts that the current New Zealand charges are user pays, then the operation of six axle semitrailers and the nine axle B-Doubles on public roads (with details below) are in receipt of an annual hidden subsidy of nearly \$2 billion per year.

This amounts to a hidden subsidy about 1 cent per net tonne kilometre. This unit estimate does not include externalities such as road crash risk, emissions and urban road congestion.

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<sup>10</sup> A 2014 Heavy vehicle charges determination of the National Transport Commission (NTC) noted a then recent estimate of the numbers of six axle articulated trucks (semitrailers) as 42,522 moving 3093 million km and using 1579 million litres of diesel. If we use these figures with current NTC charges of \$6232 registration and the discounted road user charge of 25.8 cents per litre (motorists pay over 40 cents a litre excise), we get a contribution of about \$265m in registration fees and \$407m in fuel based road user charges. This is a total of \$672m.

Now apply the New Zealand mass distance charges to the 3095m kilometres of semitrailer haulage in Australia to get \$A1749m. This amount is \$1077m than the above \$672m Australian amount.

A similar calculation for 12,811 B-Doubles noted in the 2014 NTC determination that hauled some 2189m kilometres in 2013 using some 1313m litres of fuel is now done. Most B-Doubles have a registration fee of \$14,776 giving some \$189m in registration fees. Add to this \$339m in fuel based road user charges to get \$528m.

If current New Zealand road user charges at 68.3 cents NZ or 65.6 cents AU per kilometre were applied to the 2189m km, a total of \$1436 would result. The NTC aggregate charges for all B-Doubles are then \$908m short of the NZ charges.

20. It is now over 14 years (yes, fourteen years) since 2006 when the Productivity Commission issued a report on road and rail access pricing that found the National Transport Commission (NTC) charges to be “*conservative*” and made recommendations that CoAG take up road pricing. By 2009, delays were being encountered by the CoAG process and in 2010, the Henry Tax Review made several pertinent recommendations for road pricing reform.

These included one that CoAG “*should accelerate the development of mass-distance-location pricing for heavy vehicles...*”

In 2017, the Department of Infrastructure and Regional Development undertook a public consultation process to seek public and industry views on options for independent price regulation of heavy vehicle charges. This included the option of ACCC being the regulator. The progress apparently made in 2018 and in 2019 to this outcome, at least in the public domain, is simply not good enough.

It is noted that in 2019, after consultation, a National Freight and Supply Chain Strategy was released. However, this does not address the thorny issue of road pricing.

21. It is hard to see why Australian charges for heavy vehicles in aggregate, and annual charges for semitrailers and B-Doubles hauling heavy loads long distances each year, should be about one third of the respective New Zealand charges.

Unless of course, it is part of a de facto policy to put more ‘loads on roads’ and to make rail freight, sea freight, pipelines and conveyor belts financially unattractive for moving most types of freight.

In this regard, the National Freight and Supply Chain Strategy (NFSCS Figure 2.2 -Projected freight growth by mode in Australia) suggests the domestic freight task (in tonne kms) increasing by 35 per cent from 2018 to 2040, with a hefty growth in road freight. Here, the ABS SMVU estimated the 1017-18 road freight task at about 215 billion tonne kms (btkm), and the NFSCS projects about 400 btkm.

It is submitted that Australia simply cannot afford such an increase.

### **Road deficits**

22. The operation of road vehicles imposes appreciable external costs on the community. In a paper *Moving People: Solutions for a Livable Australia* Bus Industry Confederation (2012) estimates of “road deficits” of about \$20 billion pa in 2001 and \$27 billion pa in 2010 were cited. Clearly, some effort should be made to direct more of these costs onto road users as opposed to the wider community.

External costs of articulated truck movements including road crash risk, emissions, and road congestion but excluding unrecovered road system costs are broadly estimated at over one cent per net tonne km in non-urban areas and over two cents per net tonne km in urban areas. These costs, which far exceed the external costs of rail freight, were addressed by a 2012 report by the NSW IPART on grain transport.

### **Oil Vulnerability**

23. A major input into road vehicle use is that of liquid fuel. In the 12 months ended 30 June 2018, from ABS SMVU data, registered motor vehicles in Australia consumed

an estimated 34.17 billion litres of fuel. By way of contrast, rail used in 2010 less than one billion litres of diesel for a smaller passenger task but a larger freight task than road.<sup>11</sup> Rail also uses electricity, produced mostly from domestic coal, then with an oil equivalent of about 1.2 billion litres that year.

24. As noted earlier in 2019 by Engineers Australia in their monthly magazine “Create”, and an article *Fuel security needs addressing on more fronts than one* by Geoff Smith and Philip Laird in the October 2019 issue of Railway Digest, liquid fuel, such as petrol and diesel, accounts for 98 per cent of the nation’s transport fuel and 37 per cent of our overall energy use.

In October 2018, stockpiles stood at 27 days of petroleum products, 22 days of petrol and 17 days of diesel – way below the recommended 90 days and much less than what the USA holds in reserve.

Over the past decade, Australia has increased its fuel imports to 75 per cent of requirements with increasing amounts of refined oil products. The above cited article notes that opinions are divided, with one point of view that Australia can purchase options to buy fuel on the market from overseas if need be (with federal money committed in 2018 for this purpose) to the ALP in opposition before the election committing a Labor Government would “safeguard Australia’s fuel security by boosting fuel stocks.”

The article quoted Mr Blackburn as saying that the government has done “bugger all” to address the matter and that “They are asleep at the wheel.” He also observed that “From a current policy perspective, the government doesn’t own any strategic stocks, doesn’t require industry to hold a minimal number of stocks and doesn’t really have any control over the market. We’re the only developed country that have none of those three.”

The Railway Digest article was really sceptical of ‘off shore’ storage of holding oil reserves in countries including The Netherlands and the USA and instead, proposed two solutions which would better serve Australia’s national interest.

The first solution was improved policy settings to encourage more people and freight to move by the appreciably more energy efficient mode of rail as opposed to road transport. This will require more investment in rail track and real changes to road pricing for both cars and trucks.

The second solution was to build inland fuel storages in regional Australia. They would be large enough to hold at least 90 days (or more) supply for the surrounding area. These terminals would be supplied from the ports and refineries by block trains. In areas served by standard gauge the terminals would be built adjacent to lines that are already capable of, or could be upgraded to, a 23 tonne axle load. The fuel would then be delivered, as required, to the end user by road transport. The terminals would be ideally constructed at least 10km from major built up areas.

A big question is, who would own and operate these terminals. There is no reason why this could not be done by separate entities.

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<sup>11</sup> Australasian Railway Association Australian Rail Industry Report 2010.

Although this is a scheme nobody will want to pay for, it is a scheme that will benefit everybody who uses or benefits from the use of liquid fuels.

As noted above, over 34 billion litres of fuel is used each year in Australia by road vehicles. If there were a 1c per litre “National Emergency Fuel Levy” on just road vehicles, that would raise \$340M per annum. Such a levy would need to be imposed only until the infrastructure supporting the scheme is built.

25. There is a need to improve cost recovery of urban rail operations from train fares. Here, some but not all of the large subsidies to urban rail operations could be better redirected to the necessary rail infrastructure to meet the needs of a growing population. As well, some generous concessions to seniors could be reviewed, both in cost, and whether such concessions can be made use of in peak hours.

However, as demonstrated by the rise of rail fares in Brisbane a few years ago with a decline in patronage, increasing rail fares is not easy.

The need for improved road pricing as well as better cost recovery in public transport was recognised in the 2002 Sustainable Transport report by Tom Parry commissioned by the NSW Government.

26. Transport policies that assist in meeting national and international goals to reduce greenhouse gas emissions are also needed. Transport is Australia's third largest source of greenhouse gas emissions, with emissions from transport (now some 19 per cent and expected to be 102m t CO<sub>2</sub>-e in 2020) increasing more than any other sector.

More use of rail, with its superior energy efficiency in moving both freight and passengers when compared with road, would assist in Australia reducing its high per-capita greenhouse gas emissions. It would also improve road safety.

### **Conclusion**

27. Australia's population continues to grow and now exceeds 25.5 million people.

With the result of past under-investment in rail population increase to date, Australia now has a rail transport infrastructure deficit. Now, more than ever, Australia needs to change its outmoded land transport policies. This includes the budget process rebalancing federal government outlays on rail and road, along with serious attention being given to higher fuel excise along with congestion pricing and independent price regulation of heavy truck road user charges. Wider taxation reform is also warranted.

It is not unknown for the Federal government to make certain payments to the States conditional on specific reforms. Here, it should be possible for Treasury and or Finance to make payments for roads conditional on improved road pricing.

Funding for rail corridor preservation is now needed as a matter of urgency.