Submission to the Senate Standing Committees on Environment and Communications re Climate Change Bill 2022 and the Climate Change (Consequential Amendments) Bill

Philip Laird, University of Wollongong, August 2022

1. The holding of this inquiry by the Committee is appreciated. This submission is based on research conducted at the University of Wollongong, but is of a personal nature.

As demonstrated by changing weather patterns and older reports[1] and a 2021 report "Net Zero by 2050" of the International Energy Agency[2], there is good reason for ongoing concern about climate change.

Earlier concern within Australia about global warming is also reflected by legislation by each state, in the case of South Australia going back to at least 2007[3]. This concern is in part reflected by the decision of the Australian Government to ratify the Kyoto protocol in December 2007 and the 2008 Garnaut Review. This clearly informed Australia that without stronger action, droughts and bushfires would become more frequent and intense, and ''observable by 2020''.

Which indeed both droughts and bushfires were.

Now Australia has floods to contend with.

2. In November 2021, Australia took its Long-term Emissions Reduction Strategy to the 26th United Nations Framework Convention on Climate Change climate summit in Glasgow in November 2021. This did not assist Australia's international reputation when it came to concerns about climate change.

3. Australia's record in reducing its CO2 emissions has been taken to task by many commentators. It also has an excessive level of emissions per capita.

One balanced comment from https://www.allens.com.au/insights-news/insights/2020/05/climate-change-guide/the-big-picture-australias-commitments-under-the-paris-agreement/ included the following.

"Australia's Intended NDC (nationally determined contributions), which the Federal Government published in August 2015 in advance of the Paris Agreement being adopted, committed Australia to implementing an 'economy-wide target to reduce greenhouse gas emissions by 26 to 28 per cent below 2005 levels by 2030'

"State governments, by contrast, have made more aspirational commitments, with all states and territories adopting a target of net zero emissions by 2050.

4. The action of the new Government to legislate for a 43 per cent in reductions means that Australia is now more in line with Britain, Canada, New Zealand and the United States of America.

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[1] See for example, See for example, Steffen, W (2006) *Stronger evidence but new challenges: 'Climate change science 2001 – 2005*, DEH-AGO, and Australia vulnerable in a warming planet - leaked IPCC report finds, Sydney Morning Herald 10 October 2013, where an Intergovernmental Panel on Climate Change's (IPCC) report examined impacts and vulnerabilities from global warming and details a grim outlook for Australia.

[2] https://www.iea.org/reports/net-zero-by-2050

[3] Government of South Australia (http://www.climatechange.sa.gov.au) including legislation (*Climate Change and Greenhouse Emissions Reduction Act 2007*)

5. In late 2020, the International Monetary Fund (IMF) World Economic Outlook, (https://www.bloomberg.com/authors/AUg5ERUOVA4/kate-mackenzie) "…challenged the standard scare-tactic that cutting greenhouse gas emissions inevitably means sacrificing economic growth by arguing that there doesn't need to be a trade-off between the two. Not only that, cutting emissions delivers valuable co-benefits such as fewer deaths from air pollution and reduced traffic."

"The IMF claims that the world could get to net zero carbon by 2050 with a package of measures including a carbon price starting at US$6-10 per ton (that seems to be about a tenth of what others have said will be necessary), 80% subsidies for renewable energy, compensation for households, and public investment in green initiatives funded by borrowing at currently low interest rates. Such a package would produce little change to GDP until mid-century and financial gains after that …

"The IMF's WEO chapter builds on other evidence publ…that green measures are good for economic growth, particularly when it comes to recoveries. It also adds to the growing understanding among policy makers that climate change is far more risky than most models would have us believe. The Network for Greening the Financial System — a coalition of dozens of central banks and financial supervisors — noted last year that higher cost estimates were more "robust", and that most attempts to model the cost of climate change leave out effects such as catastrophic events and sea level rise.

6. Climate risk is of increasing concern in Australia. On 2 November 2020, Mark McVeigh v Retail Employees Superannuation Pty Ltd reached a settlement that saw that REST members are protected from climate risk. As noted, https://equitygenerationlawyers.com/cases/mcveigh-v-rest "…the AU$57bn superfund agreed to settle, stating 'that climate change is a material, direct and current financial risk to the superannuation fund,' and 'that REST, as a superannuation trustee, considers that it is important to actively identify and manage these issues.'

"In addition, REST will align its portfolio to net zero by 2050 and report against the Task Force on Climate-related Financial Disclosures (**TCFD**). The fund will conduct scenario analysis to inform its investment strategy and strategic asset allocation, disclose its entire portfolio holdings, and advocate investee companies to comply with the goals of the Paris Agreement."

This website also noted that "Australia's peak financial regulators, APRA and ASIC, as well as the Reserve Bank of Australia, have sent a clear message that businesses need to take the foreseeable risks of climate change seriously."

6. Banks in Australia are also changing. For example, Teachers Mutual Bank Ltd Annual Report and Sustainability Update 2019–2020 states, inter alia,

> "By investing and lending to the fossil fuel industry, the financial sector makes climate change worse, at a time when remedial action is urgent. The regulators agree: the Australian Prudential Regulation Authority (APRA) considers climate risk to be foreseeable, material and financial, while the Reserve Bank of Australia (RBA) cites climate change as a significant risk to financial stability. …

A further example is provided by the National Australia Bank. The quoted sustainability report gives 11 pages (29 to 39) on Managing climate change as one of five "Material Themes". In part

> "Climate change is one of the most significant challenges impacting the prosperity of our society and economy.

> "It's a source of significant risk and opportunity for our bank. We are aligning our business with the goals of the Paris Agreement: to keep global warming to less than two degrees Celsius, striving for no more than 1.5 degrees Celsius above pre-industrial levels and supporting a just transition to a net zero emissions economy by 2050. This includes transitioning our operations to renewable energy, and working with our customers to support their implementation of low-carbon transition plans so we achieve a net zero emissions lending portfolio by 2050… Climate change is not an issue facing just one company, industry, or country, so we participate in initiatives and frameworks that cross these boundaries. …NAB is one of 38 banks globally, and the first Australian bank, to sign the Collective Commitment to Climate Action (CCCA).

7. It is hoped that the present Bills, strengthened as need be, get the support of the Committee.

It is noted that the Bills do not seek to impose a price on carbon.

This writer is of the view that targets are more likely to be met if a price is placed on carbon emissions; however, the bill is seen as a good step forward for the present Parliament.

It is also of note that New Zealand has had a price on carbon for at least twelve years now, and carbon pricing has effectively had bipartisan support since 2008. See https://environment.govt.nz/what-government-is-doing/areas-of-work/climate-change/ets/ and https://environment.govt.nz/publications/new-zealands-greenhouse-gas-inventory-1990-2019-snapshot/how-new-zealand-compares-to-other-countries/ for more information.

Other measures adopted by New Zealand since 2019 include generating 80% of its electricity from renewables, and that portion will be higher by 2035 as offshore oil and gas are phased out; shifting its fleet to electric vehicles and is working to transition other vehicles to electric, restarting a program to subsidize home insulation and is putting $14.5 billion over the next 10 years into transit, biking and walking infrastructure. In addition, New Zealand has a commitment to planting one billion trees by 2028.

8. If the present Bills do not include the re reinstatement of a body equivalent to the Climate Change Commission established in 2011 by the Australian Government and abolished in 2013, then consideration should be givento this.

9. Attention is drawn to the amendment proposed to the Bills by Ms A Spender in the House of Representatives (d) the effectiveness of the Commonwealth's policies in contributing to the achievement of Australia's greenhouse gas emissions reduction targets and reducing emissions in the sectors covered by those policies.

Particular support is given to reporting progress in emissions, sector by sector. Without this, the Bill if passed into law will be less effective than it should be.

10. The remainder of this submission will deal with transport as this has been the sector, since the 1990s, with the fastest growth in emissions. Hence the need for reporting of greenhouse gases, and making efforts to reduce emissions, in this important sector.

11. As the 2007 Prime Ministerial (Howard Government) Task Group on Emissions Trading issues paper noted, inter alia, in 'Context setting': ***"Significant effort will also be needed to restrain emissions in other sectors, especially transport."***

However, the efforts made to date by the Australian government to restrain greenhouse gas emissions in transport and to improve overall energy efficiency in transport have been far too limited to date.

One move that would help would be to implement the recommendations of the 2010 Henry Tax Review for transport (some follow in part).

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. …

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. …

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.

12. A National Strategy for Lowering Emissions from Urban Traffic and a National Action Plan, as approved by the Australian Transport Council in August 2002, recommended a new approach. To quote from the communique for this meeting: *The Strategy and Action Plan developed by the National Transport Secretariat in collaboration with all states, territories and the Commonwealth government provides a groundbreaking national approach to reducing greenhouse emissions from the transport sector. This includes, within the next 5-10 year '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.'*

In 2008, the Garnaut climate change review observed[4] that *"Governments have a major role in lowering the economic costs of adjustment to higher oil prices, an emissions price and population growth, ... Mode shift may account for a quarter of emissions reductions in urban public transport…"*

The Organisation for Economic Co-operation and Development (OECD) in its 2004 Annual Report noted (page 48) the need for government to avoid '***Environmental harmful subsidies'*** that exacerbate adverse environmental impacts; also (page 51) that *governments can use taxes to encourage their citizens to take better care of their environment*.

It can be convincingly argued that Australia's recent past and present road pricing policies have encouraged an increase in road vehicle use. This is by design or accident and coupled with a past lack of investment into both urban and regional rail,[5] has led to excessive automobile dependence in our main cities.

It has also ensured that Australia continues to have one of the highest road freight activity in the world (expressed as net tonne kilometers per capita).

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[4] Garnaut Climate Change 2008 review -Chapter 21 -'Transforming transport' at http://www.garnautreview.org.au

[5] See for example, Dr Hewson, Australian Financial Review (NSW, *Shunted into a siding,* 1 Feb 2008) "One area of significant potential change is the balance between road and rail transport … Yet, generally, our governments underinvest in rail while overinvesting in …

In reducing greenhouse gases, government is encouraged to take a view that each sector should be required, from the start of any scheme, to ***'pull its weight'***. This includes transport.

More and recent comment by this writer on reducing transport emissions in Australia is given in Appendix A. Older comment is given in Appendices B and C.

13. The Bureau of Infrastructure and Transport Research Economics (BITRE), then under the name of The Bureau of Transport and Regional Economics under produced a report in 1996 on 16 measures for reducing greenhouse gas emissions in transport.The measures included reducing vehicle kilometres travelled (VKT), reducing 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.

The most recent report by this agency on greenhouse and emissions appears to be in 2012 with its Greenhouse gas abatement potential of the Australian transport sector—Summary report.

An updated report from this respected agency on effective ways for Australia to reduce emissions in transport, produced without undue delay, would be most helpful.

14. In summary, passage of these two Bills is supported as a necessary but not sufficient measure to meet Australia's long term self interest and current international expectations. Passage of these bills would likely be appreciated by our Pacific neighbours.

Conversely, failure to pass either of these two bills, or bills with stronger measures, would be very costly to Australia.

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APPENDIX A Transport is letting Australia down in the race to cut emissions

Reprinted from the Conversation for March 2, 2020, by this writer,
see https://theconversation.com/transport-is-letting-australia-down-in-the-race-to-cut-emissions-131905 for graphs and links to related articles.

At a time Australia is meant to be reducing its greenhouse emissions, the upward trend in transport sector emissions continues.

The latest National Greenhouse Gas Inventory report released [February 2020] shows the transport sector emitted 102 million tonnes (Mt) of carbon dioxide equivalent ($MtCO_2$-e) in the 12 months to September 2019. This was 18.9% of Australia's emissions.

Overall, the trend in emissions from all sectors have been essentially flat since 2013. If Australia is to reduce emissions, all sectors including transport must pull their weight. Transport emissions have gone up 64% since 1990. That's the largest percentage increase of any sector.

Transport emissions are now equal second with stationary energy (fuels consumed in the manufacturing, construction and commercial sectors and heating) at 18.9%.

The electricity sector produces 33.6% of all emissions. The main reasons for transport emissions trending upwards are an over-dependence on cars with high average fuel use and an over-reliance on energy-intensive road freight.

Inevitable results of policy failure

Increasing transport emissions are a result of long-standing government policies on both sides of politics. In 2018, the Climate Council noted: Australia's cars are more polluting; our relative investment in and use of public and active transport options is lower than comparable countries; and we lack credible targets, policies, or plans to reduce greenhouse gas pollution from transport.

John Quiggin and Robin Smit recently wrote about vehicle fuel efficiency for The Conversation. They cited new research that indicates emissions from road transport will accelerate. This is largely due to increased sales of heavier vehicles, such as four-wheel drives, and diesel cars.

The government has ignored recommendations to adopt mandatory fuel-efficiency standards for road passenger vehicles. Australia is the only OECD country without such standards.

Research by Hugh Saddler found a marked increase in CO_2 emissions from burning diesel (up 21.7Mt between 2011 and 2018). A 2015 Turnbull government initiative to phase in from 2020 to 2025 a standard of 105g of CO_2 per kilometre for light vehicles was "shelved after internal opposition and criticism from the automotive lobby".

At the same time, the uptake of electric vehicles is slow. Economist Ross Garnaut, in his 2019 book Superpower: Australia's Low-Carbon Opportunity, sums it up: *Australia is late in preparation for and investment in electric road transport.*

Australia's low transport energy efficiency (and so high CO_2 emissions) has also attracted overseas attention. The American Council for an Energy-Efficient Economy rates the world's 25 largest energy users for sectors including transportation. In 2018, Australia slipped two places to 18th overall.

It was 20th for transportation with just 6.5 points out of a possible 25 on nine criteria.

On four of these criteria, Australia scored zero: fuel economy of passenger vehicles, having no fuel-efficiency standards for passenger vehicles and heavy trucks, and having no smart freight programs.

For vehicle travel per capita, the score was half a point. For three metrics – freight task per GDP, use of public transport, and investment in rail transit versus roads – Australia scored just one point each.

Only in one metric, energy intensity of freight transport, did Australia get full marks. This was a result of the very high energy efficiency of the iron ore railways in Western Australia's Pilbara region.

The International Monetary Fund (IMF) has also questioned the Australian government's preference for funding roads rather than more energy-efficient rail transport. The IMF says Australia should be spending more on infrastructure, but this should be on rail, airports and seaports, rather than roads.

What can be done ?

The first thing is to acknowledge that our preferred passenger transport modes of cars and planes cause more emissions than trains, buses, cycling and walking. For example, CO_2 emissions per passenger km can be 171 grams for a passenger car as against 41g for domestic rail.

For freight, our high dependence on trucks rather than rail or sea freight increases emissions by a factor of three.

A 1996 report, Transport and Greenhouse, from what is now the federal Bureau of Infrastructure, Transport and Regional Economics (BITRE), reviewed no fewer than 16 measures (including five "no regrets" measures) to cut transport emissions. In a 2002 report, *Greenhouse Policy Options for Transport,* BITRE offered 11 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).

BITRE …[visited] this important issue in a 2009 report on transport emission projections to 2020. This report projected a total of 103.87Mt CO_2-e for 2019. Actual 2019 transport emissions were about 102Mt.

It's important to note that BITRE's 2009 projection was on a business-as-usual basis. the current level of about 4 tonnes a year per person is where Australia was in 2000. Clearly, Australia needs to do better. As well as the BITRE remedies, another remedy would be to adopt a 2002 National Action Plan approved by the Australian Transport Council in collaboration with the Commonwealth, state and territory governments. The plan included, within ten years, "programs that encourage people to take fewer trips by car" and a shift "from predominantly fixed to predominantly variable costs" to "ensure that transport users experience more of the true cost of their travel choices". This did not proceed.

However, New Zealand has effectively adopted this approach for many years. Petrol excise in March 2020 was 66.524 cents per litre (and now more, just 42.3c/l in Australia) and the revenue goes to the National Land Transport Fund for roads and alternatives to roads, resulting also in lower registration fees for cars. New Zealand has had mass distance pricing for heavy trucks for 40 years. These measures have not stopped its economy performing well.

Why do measures that would reduce transport emissions continue to be so elusive in Australia?

APPENDIX B Some older overseas perspectives

On 14 December 2007 an **"International Symposium - Climate Change and Transport Strategy Forum"** was held at Nagoya with a total of approximately 350 experts in attendance from Japan and around the world, who specialize in climate change, transportation and the economy. The Symposium's Keynote Speaker was Lord Nicholas Stern, Professor at the London School of Economics who spoke on "Climate Change, Economics of a Global Deal and the Role of Transport".

What follows is edited from an account at the website http://ecotransport.jp/en/eventreport.html

- Unless action is taken now to reduce greenhouse gases (GHG), there is positive scientific evidence that a major disaster will result.
- Targets must be established to prompt action now to reduce CO2e (CO2 equivalent) throughout the world by 50% (80% in developed nations). For example, targets achievable by 2020 need to be set.
- There is no specific remedy, but a combination of mitigating mechanisms are required, including a pricing system (taxes, ETS), regulations, infrastructure investment, public transportation systems, and technology.
- Transport is a principal source of GHG emissions, and thus one major cause of climate change
- Such emissions account for 13～14% of CO2e and 23～24% of CO2 emissions (30% in OECD nations)

- On the per passenger-kilometer basis, railways have a much smaller impact on the environment and climate change than aircraft or automobiles.
- The demand for aircraft and airports is continuing its rapid increase (5% annually on a global scale). Airports and aircraft management systems are directly confronting a serious problem of capacity.
- The development of high-speed railways on high-density urban lines can alleviate problems of congestion as well as automobile and aircraft transport capacity, in addition to being consistent with appropriate climate change policies.

In brief summary, ***"delaying climate change mitigation is dangerous and costly"*** and when we consider passenger transportation from the perspective of the global environment, it is necessary to increase the traffic share allocated to railways.

APPENDIX C 1979-1999 Some Australian Reports re energy efficiency

i. Following the second world oil price shock, a then relatively 'new' approach to energy use in transport was suggested in 1979 in an Australian Transport Advisory Council publication called *Transport and Energy Overview.*

Although the data used in this report is now dated, the approach is commended, as are the conclusions. In part: *"... rail is relatively energy efficient compared to road for long distance freight ... (and) ... does have fuel substitute options, such as coal-oil slurries or electrification ..... As far as possible pricing and cost recovery policies should be consistent across the modes so as to encourage use of modes appropriate to particular tasks. Appropriateness may be defined broadly as minimising the total social cost of transport services, including externalities.*

ii. In the late 1990s, two notable contributions to the transport debate in Australia were made by non government organisations. One was from the Chartered Institute of Transport in Australia who issued a statement at its 1998 National Symposium: *"Our greatest ever source of cheap energy may soon contract and the 'Petroleum Age' in which we live now can be seen to be approaching an eventual end. ...The Symposium heard that a clear consensus is emerging that cheap oil production outside the Middle East will begin permanent decline around the year 2000, to be followed by permanent world decline within 15 years ...'More of the same' in our current transport plans and ways of thinking is no longer tenable. ..."*

The Institution of Engineers, Australia (a 1999 TaskForce (chaired by the late Ted Butcher AM) *Sustainable transport: responding to the challenges*) found that we have major problems in major cities, and, there is a need to respond to the challenges. In brief:

A Taxation and fiscal policy instruments should encourage sustainable transport. At present, these measures encourage car and truck use.

B There is a strong case for increased investment in transport infrastructure that is more sustainable and less greenhouse gas intensive. Where market forces fail, government should intervene.

C More holistic approaches to transport decisions are needed that integrate considerations of impacts on health, sustainability and greenhouse gas emissions.

D There is a need for research to support cleaner transport fuels and technologies, along with transport pricing, economics and demand management technologies.