AUSTRALIAN TRUCKING ASSOCIATION

REVIEW OF THE CARBON CREDITS TRANSPORT METHOD

AUSTRALIAN TRUCKING ASSOCIATION SUMISSION
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1. About the Australian Trucking Association

The ATA represents the 50,000 businesses and 200,000 people in the Australian trucking industry.

2. Summary of recommendations

Recommendation 1
The ERAC review should recommend that governments prioritise the reduction of barriers to new investment by road transport operators in vehicles, technologies, energy sources and operational practices which bring forward business as usual investment decisions to reduce emissions.

Recommendation 2
The ERAC review should recommend delivery of a national HPFV network, to reduce the emissions of the road transport task and incentivise the purchase of newer heavy vehicles with the latest emission standards.

Recommendation 3

The ERAC review should recommend that governments review and amend Australian Design Rules and in-service vehicle regulations to enable greater use of more fuel-efficient heavy vehicle solutions.

Recommendation 4
The ERAC review should recommend that governments implement a width exemption for aerodynamic devices, such as Airtabs, to allow trucks to incorporate more fuel-efficient heavy vehicle solutions.

Recommendation 5
The ERAC review should recommend that the Australian Government amend the *Fuel Tax Act 2006* to remove the 1 January 1996 threshold, so that every heavy diesel vehicle used on public roads must meet a maintenance or test criteria to be eligible for fuel tax credits.

Recommendation 6
The ERAC review should recommend that governments incentivise the purchase of new heavy vehicles, by reducing stamp duty and providing additional investment write-off for heavy vehicle assets.

Recommendation 7
The ERAC review should recommend that state and territory governments partner with industry to develop local solutions for reducing emissions, congestion and regulatory burdens on efficient road transport.

3. Introduction

The Emissions Reduction Fund (ERF) has not driven reductions in transport emissions in the road freight sector as it fails to enable the increased uptake of everyday business practices which would move more freight with less emissions.

This periodic review of the Land and Sea Transport method (transport method) for crediting emission reductions under the ERF is being conducted by the Emissions Reduction Assurance Committee (ERAC). This is a statutory committee which advises the Minister for the Environment and Energy on the environmental integrity, efficiency and operability of the ERF methods.

The ERAC's consultation paper states that the transport method credits emissions reductions from activities such as replacing or modifying existing vehicles, changing to lower emission energy sources (such as bio-fuels), installing low rolling resistance tyres or changing operational practices (such as load scheduling). Abatement under the ERF must be additional to what would occur through business as usual practices.

It is also stated that the ERAC review will consider how emerging trends in domestic transport systems might influence investments in improving fuel efficiency, which also reduce emissions.

The ERAC consultation paper identifies that the method has not been widely taken up, accounting for less than two per cent of the ERF's contracted abatement.

4. Trends in transport emissions

The ERAC review paper highlights projected trends in transport emissions from 2018 out to 2030. The projections indicate that cars and light commercial vehicles contribute 60 per cent of transport emissions in 2018, but domestic shipping, aviation, railways, rigid and articulated trucks are projected to contribute the bulk of the growth in emissions to 2030.

Of the projected growth rates, the ATA notes that articulated trucks are projected to have the smallest growth rate (15.4%) compared to rigid trucks (22.2%), railways (25%), domestic aviation (33.3%) and domestic shipping (50%).

For cars (projected growth rate of zero per cent to 2030) and light commercial vehicles (6.3%), it would appear that these projections rely on improvements to the emissions performance of these sectors to achieve minimal growth in emissions whilst at the same time the number of vehicles is likely to increase.

5. Useability of the transport method

Examples provided of eligible activities under the method include replacing or modifying vehicles, changing energy sources and changing operational practices.

These decisions are primarily an investment decision for business that is influenced by factors including the expected growth of their business, access to finance and taxation policies. The trucking industry is also complex, dominated by small businesses operating in

a variety of industry sectors, routes and business structures. Determining an eligible abatement activity, as opposed to business as usual, is likely to be difficult with a high administrative burden for small trucking businesses. The low uptake of the method would appear to confirm this is likely.

The real focus for incentivising eligible abatement activities should be to bring forward business as usual activities without the complexity and regulatory burden of government trying to determine what is or isn't a business as usual decision. This requires a set of policies that lower barriers to investment for a transport operator to reduce their emissions.

Projected emissions reductions, comparative to the increasing fleet size for light vehicles, illustrate that a mixture of technology improvements and their uptake by road users through individual purchasing decisions can deliver longer term benefits for reducing the growth of transport emissions.

In terms of alternative energy sources, ATA member associations report that there is concern within industry about the quality of bio-fuels and the impact on the maintenance cost for trucks. For alternative energy sources that are still in development, such as electric and hydrogen vehicles, take up may vary by industry sector and be dependent on how accessible the technology becomes.

Hydrogen vehicles may have potential for some in industry due to potential around energy density, quicker refuelling and the design features of allowing for greater vehicle range. However, take up within industry will remain small until refuelling/recharging infrastructure is in place, costs reduce, and it is demonstrated that whole of life cycle running costs will reduce.

It is worth noting that some sectors of the industry will be more likely to make a decision to change energy sources, such as urban based fleets with lighter commercial vehicles or rigid trucks. This is illustrated by the recent announcement that the City of Casey will add several new electric trucks to the waste servicing fleet at WM Waste Management, as part of a new waste contract.[1]

Until these issues are addressed it is unlikely that any mechanism will have much success in encouraging transition to alternative energy sources for the broader road freight industry.

Recommendation 1
The ERAC review should recommend that governments prioritise the reduction of barriers to new investment by road transport operators in vehicles, technologies, energy sources and operational practices which bring forward business as usual investment decisions to reduce emissions.

[1] Prime Mover Magazine, 29 May 2019, Electric waste trucks arrive in Casey.

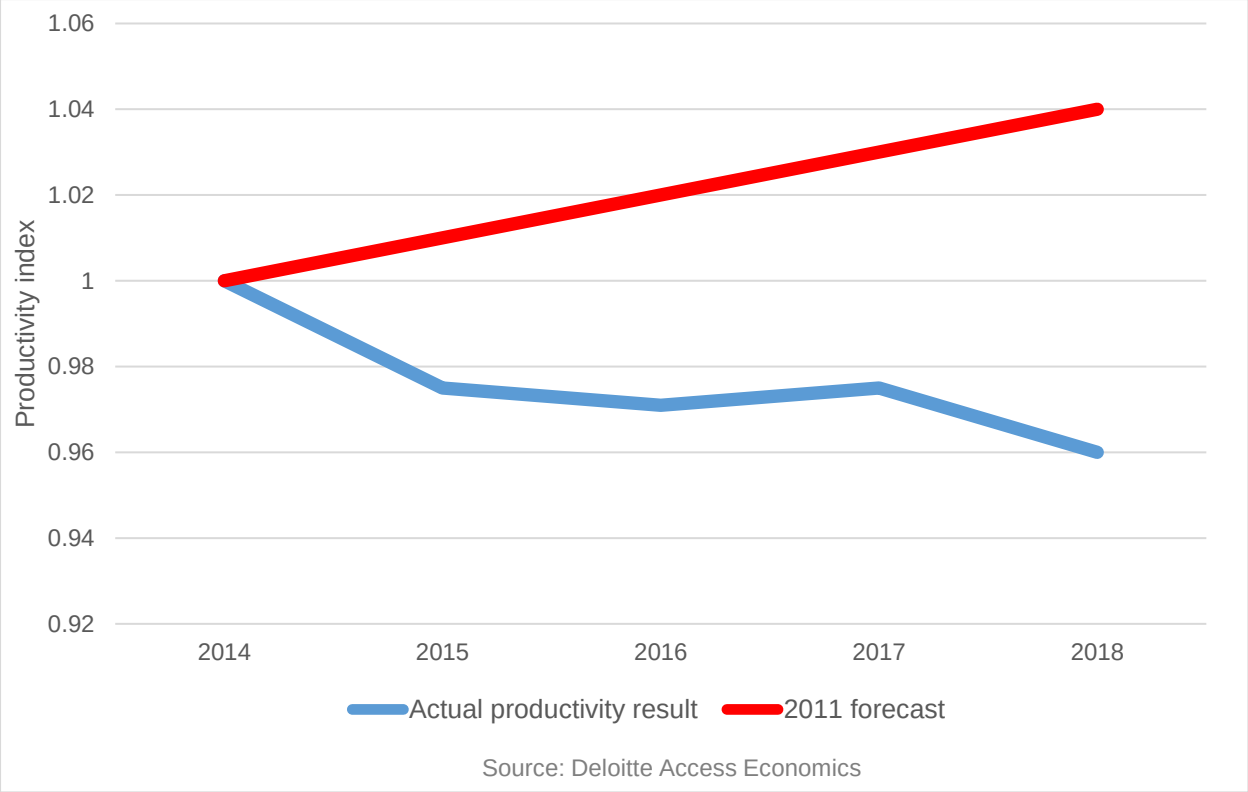
6. Encouraging investment in lower road transport emissions

Delivering a national HPFV network

Enabling road freight productivity growth is critical to reducing road transport emissions, especially for articulated trucks. Between 1971 and 2007, trucking industry productivity increased six-fold due to the uptake of high productivity vehicles like B-doubles. It has been estimated that in the absence of productivity improvements over this period that nearly 150,000 articulated trucks, in addition to the 70,000 registered for use in 2007, would have been required to undertake the 2007 articulated truck freight task.[2]

However, this productivity growth has not been maintained. In 2011, it was predicted that the implementation of the then proposed Heavy Vehicle National Law would deliver up to $12.4 billion in economic benefits.[3] Figure 1 shows the reality. The productivity of the transport, postal and warehousing sector has fallen steadily since 2014.[4]

Figure 1: forecast and actual changes to industry productivity, 2014-2018



Building on the success of the B-double, the Australian Government should deliver a high productivity freight vehicle network (HPFV) to enable as of right access for HPFV vehicles, including modular A-doubles up to 35 metres.

[2] Bureau of Infrastructure, Transport, and Regional Economics, 2011, *Truck productivity,* pxiv
[3] NTC, Heavy Vehicle National Law Regulation Impact Statement. September 2011. 16
[4] Deloitte Access Economics, Economic benefits of improved regulation in the Australian trucking industry. Report commissioned by the ATA, March 2019. 21.

HPFVs deliver important productivity, safety and environment benefits. Austroads has reported that high productivity freight vehicles:

- demonstrated **76 per cent fewer accidents** than would be the case for conventional trucks, and a 63 per cent reduction in major accident incidents on a weighted fleet basis
- operational HPFV fleets, due to the use of newer vehicles, are reported to **make use of the latest emissions standards**
- HPFVs are expected **to save 5.9 million tonnes of diesel by 2030**
- through the use of lower numbers of trucks, HPFVs **reduce impacts on the community from noise, emissions, accidents and lead to lower pavement impacts on the road network**.[5]

The reductions in emissions and the number of truck trips required to move a 1000 tonne transport task is illustrated by the following table.

High Productivity Freight Vehicle configurations

Configuration	Nominal Payload (tonnes)	Payload Equivalency	No Trips to transport 1000 tonnes (GML)	CO2 (tonnes) emitted per 1000 tonne transport task	Road space equivalent (kilometres) with 3 second spacing
19metre (24 pallet) Semi-trailer	24.04	1.00	42	28.78	4.3
26metre 36 pallet B-double	38.84	1.62	26	23.48	2.84
PBS Level 2A truck and dog (8x4 with 6 axle dog)	39.92	1.66	25	25.10	2.73
PBS A-double	48.73	2.03	21	20.53	2.38
35metre Modular B-triple	52.35	2.18	19	19.14	2.25
36.5metre Type 1 Road Train	51.43	2.14	19	19.43	2.28
36.5metre AB-triple	66.7	2.77	15	16.56	1.8

To enable this more sustainable approach to moving Australia's freight task, leadership is required from the Australian Government to deliver a national HPFV network. This network should provide:

- As of right access for modern HPFV combinations that do not require individual permits for each trip,
- Access to major and important freight routes,
- Adequate rest area and coupling/de-coupling bay facilities,
- Integration with local land use planning to integrate the network with industrial and logistics land, protect current and future road corridors and enable the 24-7 operation of the network, and
- Upgraded bridges and other infrastructure constraints to enable use of the network.

[5] Austroads, 2014, Quantifying the Benefits of High Productivity Vehicles, pi.

The Australian Government already has the policy mechanisms to deliver this network. The 10-year infrastructure funding pipeline, Roads of Strategic Importance program and the commitment to fund corridor strategies to guide road funding on some of these corridors provide a framework by which the Government can:

- Set HPFV access objectives on important road corridors,
- Identify infrastructure gaps to delivering these objectives and development an investment plan to upgrade the corridor, and
- Set a long term, stable funding commitment to upgrade these routes.

Access to a national HPFV network and its productivity benefits would also incentivise the purchase of newer heavy vehicles, with the latest emission standards.

Recommendation 2
The ERAC review should recommend delivery of a national HPFV network, to reduce the emissions of the road transport task and incentivise the purchase of newer heavy vehicles with the latest emission standards.

Vehicle design solutions

The fuel efficiency of heavy vehicles can be improved through amending vehicle design rules to allow vehicle technologies which improve fuel economy. For example, aerodynamic devices such as airtabs would allow heavy vehicles to increase fuel economy by up to 6 per cent. However, current Australian Design Rules (ADR) prevent their use due to width requirements. Similarly, the use of single wide tyres would provide reductions in fuel use.

Vehicle design rules should also be amended to allow an increase in vehicle width to 2.6 metres, in line with international and European standards. An increase in allowable width would particularly benefit operators of hard-walled refrigerated trucks, which could have thicker insulated walls without loss of payload. In 38 degree outside temperatures, these thicker walls would reduce heat gain by 36 per cent and deliver a fuel saving of 2,500 litres per typical refrigerated vehicle per year.[6]

Recommendation 3

The ERAC review should recommend that governments review and amend Australian Design Rules and in-service vehicle regulations to enable greater use of more fuel-efficient heavy vehicle solutions.

Recommendation 4
The ERAC review should recommend that governments implement a width exemption for aerodynamic devices, such as Airtabs, to allow trucks to incorporate more fuel-efficient heavy vehicle solutions.

[6] Refrigerated Warehouse and Transport Association, *Submission to the National Road Transport Commission on a proposal that 2.6m trailers be permitted for the carrying of temperature controlled commodities*, July 1998, 3.

Fuel Tax Credits reform

Regular maintenance is the key to ensuring that vehicles continue to meet emission standards. For example:

- the 2004 energy white paper reported that repairing poorly maintained diesel vehicles could reduce their particulate emissions by 45 per cent.[7]
- case studies in the US mining industry of the relationship between diesel engine maintenance and exhaust emissions found that effective maintenance could reduce CO emissions by 65 per cent and PM emissions by 55 per cent.[8]
- a test of 168 diesel cars (ranging from pre-Euro to Euro 4 emission standards) found that 75 per cent had emission faults. Performing maintenance on a Euro 4 vehicle with multiple induced defects reduced all its pollutant emissions except carbon monoxide; its particulate emissions were reduced by 70-80 per cent over all driving cycles. The research found no correlation between the age of the diesel vehicles in the sample tested and the number of emission defects.[9]

When it came into force, the *Fuel Tax Act 2006* included a powerful incentive for truck operators to maintain their vehicles.

Under the Act, businesses that operate trucks with a gross vehicle mass (GVM) of more than 4.5 tonnes on public roads can claim fuel tax credits for each litre of fuel they buy for use in those vehicles.

Under s41-25(1) of the Act, vehicles used on public roads must meet one of four environmental criteria to be eligible for the credits. These criteria are:

(a) the vehicle was manufactured on or after 1 January 1996, the commencement date of the ADR 70/00 (Euro 1 and equivalent) emission standards for all new heavy vehicles,
(b) the vehicle is registered in an audited maintenance program accredited by the Transport Secretary,
(c) the vehicle meets Rule 147A of the Australian Vehicle Standards Rules 1999 (ie: it has passed a DT80 in-service emissions test within the last two years), and
(d) the vehicle complies with a maintenance schedule endorsed by the Transport Secretary. The endorsed maintenance schedule is not onerous.[10]

When the Act came into force, 61 per cent of the trucks registered in Australia were manufactured before 1996, and therefore had to meet one of criteria (b) – (d) to be eligible.

By 2016 this had fallen to 33 per cent of the trucks in service. As a result, the majority of the trucks in Australia do not have to meet any maintenance requirement or test to be eligible to receive fuel tax credits.

The original incentive for regular maintenance included in the *Fuel Tax Act 2006*, critical to maintaining emissions standards in trucks, has been diminished by the passage of time and will only continue to decrease without legislative change.

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[7] Australian Government, *Securing Australia's energy future,* 2004, p103.
[8] McGinn, S. *The relationship between diesel engine maintenance and exhaust emissions,* Noranda Technology Centre for the Diesel Emissions Evaluation Program (DEEP), p8.
[9] Pillot, D et al. *Impacts of inadequate engine maintenance on diesel exhaust emissions,* Transport Research Arena, 2014, Paris.
[10] Department of Transport and Regional Services, *Fuel tax credit for heavy diesel vehicles: guidelines for satisfying environmental criteria,* 2006, pp7-9.

Given the importance of maintenance to achieving emission standards, the ATA proposes that the 1 January 1996 threshold (criteria a) should be removed entirely. Every heavy diesel vehicle used on public roads should be required to meet one of the three maintenance/test criteria to be eligible for fuel tax credits.

Recommendation 5
The ERAC review should recommend that the Australian Government amend the *Fuel Tax Act 2006* to remove the 1 January 1996 threshold, so that every heavy diesel vehicle used on public roads must meet a maintenance or test criteria to be eligible for fuel tax credits.

Incentivising investment in new heavy vehicles

As of June 2018, over 93 per cent of trucking operators had a turnover of less than $2 million.[11] Additionally, ANZ analysis in 2017 found that the national average fleet age continues to age at record levels, and that the industry will need to invest in excess of $3.5 billion in capital over the next 5 years just to meet expected demand.

Investment would need to be higher to reduce the average age of the truck fleet. Newer vehicles have the latest safety technologies, meet newer emissions standards, and are quieter.

The Australia's Future Tax Review (Henry Tax Review) recommended in 2010 that there should be no role for any stamp duties in a modern Australian tax system.[12] In 2015, the Australian Government released a tax discussion paper (Re: think) noting that stamp duties are some of the most inefficient taxes levied in Australia, and that such taxes are more likely to discourage turnover of taxed goods.[13]

KPMG has noted that the more inefficient or distorting a tax is, the more likely resources will be moved away from their highest-value use, leading to lower productivity across the economy and lower living standards.[14] KPMG also reported that motor vehicle taxes, including stamp duties, are taxes on capital and increase the cost of investing in motor vehicles. This in turn leads to a reduction in investment in vehicles, and a high excess burden.[15]

Governments should:

- Enable productivity improvements through better road access, including a national HPFV network
- Invest in targeted measures to encourage investment in newer vehicles, including additional investment write-off for assets such as trucks and trailers
- Reduce state and territory government stamp duty burdens on the purchase of new heavy vehicles.

[11] Australian Bureau of Statistics, 8165.0 Counts of Australian Businesses, including entries and exits, June 2014 to June 2018, businesses by main state by industry class by turnover size ranges, June 2018 (a)
[12] Recommendation 51 in Australia's Future Tax System report to the Treasurer, December 2009.
[13] Australian Government, March 2015, Re:think tax discussion paper, 145.
[14] KPMG, September 2011, Economic Analysis of the Impacts of Using GST to Reform Taxes, 1, 4.
[15] Ibid, 6.

Recommendation 6
The ERAC review should recommend that governments incentivise the purchase of new heavy vehicles, by reducing stamp duty and providing additional investment write-off for heavy vehicle assets.

Urban congestion and curfews

Both regulatory and congestion burdens placed on urban road freight place upwards pressure on road freight emissions. Research has highlighted the importance of considering the effect of congestion on emissions in logistics networks, in particular due to congestion impacting on travel speed.[16] Additionally, congestion can cause inefficiencies from less efficient distribution decisions (such as less customers serviced per trip) and additional kilometres travelled to avoid congested areas.[17]

Regulatory restrictions, such as time curfews, can also add to these inefficiencies.

ATA member associations have taken the lead on addressing these urban challenges in specific cities, as illustrated by the following examples. Western Roads Federation have established the WRF Metro Logistics Group which unites different industry sectors and encourages engagement across various government agencies. This includes enabling research to analyse urban road freight data, which will then provide a better evidence base for decision making. WRF are also exploring options for encouraging cleaner commercial vehicles, including light commercial vehicles, to be incentivised with greater access or reductions in curfew restrictions.

In Melbourne, the Victorian Transport Association has engaged with local communities to develop the proposed Cleaner Freight Initiative. This proposal would require better trained drivers and greater uptake of low-emission heavy vehicles to enable greater access for curfew-free times to specific routes.

Recommendation 7
The ERAC review should recommend that state and territory governments partner with industry to develop local solutions for reducing emissions, congestion and regulatory burdens on efficient road transport.

[16] Kellner, Florian, 2016, Exploring the impact of traffic congestion on CO2 emissions in freight distribution networks, Springer, 2.
[17] Ibid, 13.