



ATA Submission TO Productivity Commission Inquiry Into Energy Efficiency

Aim of Inquiry:

The Australian Trucking Association notes that this “Inquiry Into the Economic and Environmental Potential Offered by Energy Efficiency” seeks comment on “improvements in energy use which are cost effective for individual producers and consumers, have potential to enhance Australia’s economic prosperity and at the same time lower Australia’s greenhouse signature”.

Background:

The Australian Trucking Association (ATA) is the peak industry body for the hire and reward sector of the road freight transport industry and draws its membership from state and sector trucking associations, national trucking companies and the Transport Worker’s Union.

The Australian Trucking industry:

Details of the Australian trucking industry are available in the enclosed publication *Trucking -Driving Australia’s Growth and Prosperity*. The salient points are:

- The total truck fleet travels around 12,505 million kilometres and transports some 1,549 million tonnes of freight per year
- There are approximately 32,000 trucking businesses in the hire and reward sector
- There are 810,052 km roads and 44,262 km of rail track.
- There are some 450,000 heavy trucks on register of which approximately 65,000 are articulated vehicles.
- Trucks account for 21% of Australia’s greenhouse emissions by road vehicles and account for 2.6% of total greenhouse emissions.
- Engine emission standards and fuel standards are set by Commonwealth government regulation
- Mass, dimension, loading, access and in-service truck standards are set by state and territory governments on model regulations developed by the National Transport Commission.

ATA Activities:

The ATA delivers an industry accreditation program under the name of TruckSafe which focuses on driver health, scheduled vehicle maintenance, training and business

systems. This program involves over 500 businesses from owner drivers to fleet operators and covers approximately 25,000 vehicles.

The ATA Industry Technical Council, which comprises membership from both trucking operators and suppliers, provides technical advice on a range of policy matters including fuel and engine technology and energy efficiency.

The Australian Trucking Association has promoted the Greenhouse Challenge Program since its inception in the mid-1990s through its member associations, whereby individual trucking businesses ranging from owner drivers through to large fleet operations have participated in the program. This program has provided the tools for them to better measure and manage their energy consumption in their businesses and will become mandatory from 1 July 2006 for those businesses in receipt of more than \$3 m in business fuel credits.

The contribution of the total trucking industry (i.e. including hire and reward and ancillary trucking fleets) is 2.6% of total greenhouse emissions in Australia (reference Australian Greenhouse Office 2004) and 19% of road transport emissions, which comprise 90% of total transport emissions.

The Australian Trucking Association has also participated actively in the Government Business Climate Change Dialogue during 2002/03 which aimed to quantify and develop measures to assist the achievement of the government's target of controlling greenhouse emissions growth to 8% of 1990 emissions by 2010. The general conclusion from this process by the government is that Australia is on track to achieve that objective.

Specific Responses:

1. Industry Responses

Given that the average cost of fuel¹ in heavy vehicle operations is between 25% and 30% of operating costs, the trucking industry is well apprised of the need to control its consumption for business, as well as environmental reasons. The specific responses made by industry in this context include:

- driver training;
- the implementation of appropriate management practices to ensure that appropriate vehicle tasking vis a vis loads is achieved;
- that loads are maximised through consolidation for individual trips and the routing of vehicles is done to achieve maximum efficiency for the time spent on the road and the road terrain and therefore fuel used.
- utilisation of telematics systems in order to achieve more efficiencies
- acquisition of equipment wherein engine efficiency vis a vis load is maximised through the use of most recent engine technology,
- that trucks/combinations are acquired in order to take advantage of the maximum mass allowed on a given truck/combination in any given jurisdiction. The tare weight of vehicles is also a critical consideration.

¹ The current high cost of fuel at prices exceeding \$1.00 per litre have led to estimates as high as 35% of operating costs.

- trucking operators seek permits to allow higher productivity vehicles to operate on specific routes and tasks.

The TruckSafe program includes a truck maintenance module which not only provides schedules for safety features of trucks but addresses fuel efficiency as well in those schedules.

Under Commonwealth legislation the announcement made by the Government in June 2004 which will require recipients of business fuel credits under the Energy Grants Credits Scheme of more than \$3million per year to participate in the Greenhouse Challenge program, will ensure that any trucking business, in receipt of this amount, and not currently in the Greenhouse Challenge, will be participating in it from 1 July 2006. Also any business using more than 0.5 of petajoules of energy will be required to audit their energy usage and publish the results publicly for public perusal. This is estimated to equate to diesel usage of greater than \$15 million.

2. The Regulatory Framework

Regulations governing heavy truck operations are developed under both Commonwealth and State law in relation to technical requirements, vehicle dimensions, loading and access, and local government also has a role in providing or restricting access to roads and bridges which can increase or reduce transit time and payloads which translates into increasing or reducing the quantity of fuel used.

The primary regulation for vehicle technology is under the Motor Vehicle Standards Act (Commonwealth legislation) which determines engine and other standards for new vehicles. These standards have directly and indirectly delivered greater fuel efficiency (even without mass increase) and since 1995, have required tighter emissions standards(ADR 70), particularly of particulate matter and nitrides of oxygen. The current engine emissions standards set under ADR 80/00 (introduced 2003/04) have delivered higher emissions standards without compromising fuel efficiency, although engine durability has been negatively impacted by the tighter regulatory standards . The engine emission standards to be introduced under ADR 80/01, planned to be effective from 2006/07, and now delayed by 12 months by the Government announcement of 12 August 2004, will deliver fuel efficiency gains with the application of selective catalytic reduction (SCR) technology but reduced fuel efficiency under the alternative technology of engine gas recirculation (EGR). Although the former delivers 2-3% fuel efficiency the system also requires the injection of a liquid catalyst (currently identified as urea or ammonia) into an on-board catalytic convertor. The additional cost of this reagent would appear at this stage to be greater than the cost of extra fuel under the SCR technology. Therefore it is likely that businesses will be attracted to acquire the latter EGR system, given that it is delivered by an engine without external componentry which does not have the potential for additional maintenance problems Both systems deliver equivalent results to address tighter air pollutant emissions which impact on air quality. The heavy diesel engine emissions standards proposed by the Land Transport Environment

Committee (ADR 80/02), to be introduced in 2009/11, will not deliver fuel efficiency gains.

The mass loading limits of trucks are implemented by state and territory jurisdictions based on national loading regulations developed by the National Transport Commission. There is however considerable variation between jurisdictions. There are various levels of mass limits for trucks, which are all well within manufacturers' safety specifications. To use a six axle articulated truck as an example, the nationally consistent base mass limit is 42.5 tonnes gross combination mass, based on nationally uniform axle loading figures. Some such trucks can increase their GCM by one tonne to 43.5 tonnes if they are accredited under the higher mass limits arrangements developed by the National Transport Commission which require adherence to the national heavy vehicle accreditation scheme mass management module. The third level extends mass limits for six-axle artic to 45.5 tonnes however implementation of this proposal is very limited in some jurisdictions, especially in NSW and Queensland. In addition, there are some state-based schemes, particularly focusing on export freight, which allow higher mass limits on declared routes within a specific jurisdiction. Given that such increased mass is carried by the same trucks as those carrying the lower or lowest limit, a considerable energy efficiency dividend can be delivered by the full roll-out of higher mass limits and serious consideration of their further extension within manufacturers' safety limits.

The current proposal of the National Transport Commission to include a nationally consistent incremental mass loading system based on charges additional to those recovered from the heavy vehicle industry which effect any additional road wear and loads additional to current statutory and concessional limits, is supported in principle by the Australian Trucking Association as a measure which will deliver greater productivity and energy efficiency.

Road Infrastructure

Infrastructure improvements, both through the upgrading of existing roads and construction of new roads, can deliver considerable dividends in relation to transport energy efficiency. Improved and new roads reduce transit time and improved gradients of roads also address transit times and address fuel efficiency through reduced transit times and the use of less power where gradients have been reduced. The current proposals under the AusLink national transport plan has the potential to address this area. However the construction and improvement of new road infrastructure does not in itself deliver such improvements unless there is access to that infrastructure by the trucking industry, and that access charges are appropriate.

Tax issues – truck and trailer depreciation

Commonwealth Government legislation sets effective life determinations for business capital assets. The long-term effective life for heavy trucks has been five years and following a review by the Australian Taxation Office which recommended initially that that effective life be changed to 20 years and finally determined it should be 15 years, after considerable industry lobbying, the

government has announced it will cap the determination to set truck effective life at 7.5 years. The lowest possible period of effective life facilitates fleet replacement with trucks with engines which are required to be fitted by law which reduce total and air pollutant emissions and usually are constructed with modern materials and design which maximise the tare weight/power ratio of the truck, and therefore its energy efficiency.

Fuel efficiency

The overall picture with freight movements in Australia is that the trucking industry moves approximately 80% of the non-bulk freight and this is forecast by the Bureau of Transport and Regional Economics (BTRE) to double by the year 2020. During this time the fuel consumption per tonne kilometre has significantly reduced but this has primarily been delivered by increases on mass limits and improved construction techniques which have address truck and trailer tare weight.

The question of the ability of fuels which are alternatives to the use of petro-diesel delivering energy efficiencies for the trucking industry is unresolved. Generally the extra on-board storage for gaseous fuels and lower energy content of bio-fuels, combined with limitations to the supply infrastructure and the reliability of available technology has meant that the trucking industry has not embraced engine technology using these fuels, however trials are continuing.

Other energy use

Australian trucking businesses are also energy users in their operations including depot lighting, heating etc and awareness of energy consumed in these areas is, as identified in the Greenhouse Challenge Program, also important. Given the low average profitability margins of around 4% for the Australian trucking industry, the improvement energy efficiency relating to fuel usage, is a key driver for these businesses in an environment where the freight task is rapidly growing transport.

Comparison with energy use of other land transport modes.

It has been recently asserted, both in the media and in publications from other industry associations, that rail is 9 times more energy efficient than road freight transport. This bold and simplistic claim has appeared without any substantiation, yet preliminary research by the BTRE indicates that there is considerable variation in the relative fuel efficiency of rail, ranging from 28% of road's fuel use to 88%, depending on the type of heavy vehicle, route and direction and the basis of the data used for the calculations. However to extend even these much reduced comparisons into questions of modal share, let alone modal shift, would be to promote a discussion about public policy based on the cost of a single input (i.e. energy) when the major issue is to ensure that all modes have a charging regime that are not distorted by inappropriate subsidies or taxes and reflect the needs of freight customers.

Intermodal freight transfer

Where waiting times for trucks to effect intermodal freight transfer are extended by inappropriate regulation, inadequate facilities and access and low levels of interoperability between modes, these impact on energy usage. Siting, design and management of such intermodal facilities can assist in this area.

Urban planning, congestion pricing etc

It is noted that the terms of reference to the Inquiry canvass suggestions about policy options for “Improving transport related energy efficiency, including but not limited to urban planning, congestion pricing, intelligent transport systems, travel demand management and increased efficiencies in the business and freight sectors including opportunities for better matching of transport choices with transport tasks undertaken”. It is evident that the road freight transport industry has considerable motivation and expertise to introduce increased efficiencies into its operation and encourages the responsible authorities to consult with the industry in addressing issues of urban planning and congestion. Any discussion about and proposals to develop measures to address urban congestion, if applied to the road freight transport industry as distinct from other road users, needs to be approached with caution and assessed against the overall economic situation, for it is unlikely that such measures will have the potential to enhance Australia’s economic prosperity even if they are believed to lower Australia’s greenhouse signature.

Conclusion

Given the role of the Australian trucking industry in carrying the majority of Australia’s non-bulk land freight and its dependence on suitable fuels to do so, in an environment of the growing economy and forecast freight task growth, the ATA does not envisage any measures which would fundamentally reduce energy use in this sector of the economy. However, given the intensely competitive structure of the trucking industry and its reliance on fuel, efficiencies in energy use are driven by this environment and consequently Australia has the most efficient trucking industry in the world. Trucking freight rates have, in fact, been reduced over time. The ATA believe that the principal means of maintaining this position is to further extend the higher mass limits network and be wary about the impact of further engine emission standards, which may address air quality pollutants but increase greenhouse emissions.

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