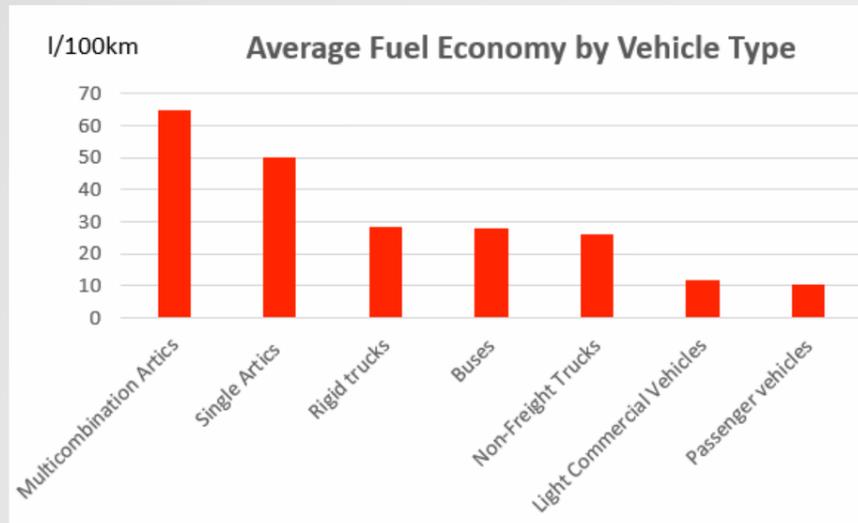




The greenhouse gas challenge and opportunity

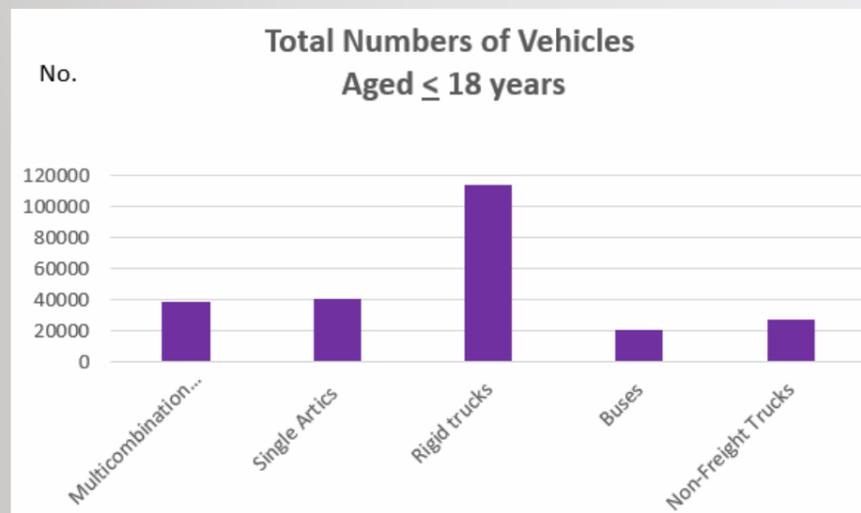


Australia has committed to reduce total greenhouse gas emissions by 26 per cent based on 2005 levels by 2030. If such a reduction were to be achieved by the road freight sector, revolutionary changes in practices would need to occur. I want to quantify the size of the challenge and suggest an industry strategy. The graph shows the size of the challenge. Road transport uses about 75 per cent of the transport sector energy use. In total, the road transport sector accounts for about 20 per cent of Australia's energy use. Diesel fuel use in road transport is growing by about 1.8 per cent per year. Based on current trends the road freight sector will have used about 20 per cent more diesel fuel

in 2030 than in 2005. We are now at the half-way mark so the prospects of achieving break-even are slim. What could we achieve if we tried very hard? The average fuel economy graph, which has been developed from the 2016 Motor Vehicle Census, shows the average fuel economy of six road vehicle categories. Ultimately a reduction in greenhouse gas emissions is an improvement of average fuel economy in each category. The second graph shows the total number of registered vehicles in each heavy vehicle category that were built since year 2000. The product of fuel economy and total

vehicle numbers determines the priority order for fuel economy improvements. This order is: heavy rigid trucks, multi-combination artics, single trailer artics, non-freight trucks and then buses. We have tried and rejected alternative fuels such as CNG and LPG because of the technical difficulties that exist. Diesel is the perfect hydrocarbon fuel. Whilst hybrid electric technology will grow in importance, diesel will be the dominant fuel for new heavy-duty vehicles for the next decade. There is now no doubt that greenhouse emissions are altering the climate. It is a moral imperative for our industry to make a serious effort to reduce our greenhouse emissions. The diagram on the opposite page gives my appraisal of the options that our industry has. It is unlikely that government will mandate any of these options because of the political difficulties in doing so. It is therefore up to industry associations to take the lead and to encourage their members to actively implement good practices.

Dr Peter Hart
Chairman, ARTSA



Potential for improvement of fuel economy

Measure	Benefit	Difficulty
Eliminate the fuel rebate and use the funds to subsidise new vehicle purchases.	Newer vehicles are more efficient and safer.	Political difficulty
Adopt a fleet road speed limit of 95 km/h.		
Mandatory driver economy training / fuel economy incentives.		
Extend the High Productivity Vehicle Networks in each jurisdiction.	Allow Super B-doubles and A-doubles on these networks.	Technical Difficulty
Require new trailers to have aerodynamic features.	Proven advances are yet to be adopted here.	
Require new trailers to have tyre pressure control (CTI).	The more tyres the greater the benefit.	
Require fleets operating in the NHVAS to share fuel economy numbers and details to participate in experience sharing.	Model Australian co-operation on the USA EPA 'Smartway' program.	
Evolution of diesel engine technology. Applicable to new trucks only.	New trucks and buses are likely to be more fuel-efficient than older vehicles.	
Subsidise demonstration of electric drive on 3-axle semi-trailers.	The front axle to have an electric drive supplied from a battery. Solar panels on the van top. Truck engine power reduced.	