

Diesel Engine and Emission Standards

With the vast majority of heavy good vehicles running off diesel powered engines in Australia greater efficiency of diesel engines has much potential to reduce GHG emissions in the short-term. Diesel itself is a very efficient fuel and at the moment only carbon free or climate neutral produced fuels generate less greenhouse gas emissions than diesel. Due to only diesel being currently available in enough substantial quantities to fuel the entire industry, diesel will continue to be the dominant industry fuel for the immediate future.

With government enforced emission standards, high fuel costs, and a higher turnover of vehicles compared to other modes, road transport companies have a record of investing in highly efficient diesel engines that can reduce their fuel bills.

Current Emission Standards

Australia's current emission standard for heavy vehicles is ADR 80/03. ADR 80/03 is based on the Euro V emission standards. Previous emissions standards adopted through ADRs have proven to be an effective means of reducing the impacts of emissions from the transport sector.

Further tightening of emission standards for road freight vehicles through Australian Design Rules look certain to continue the trend of reducing emissions and other pollutants into the future. ADR standards have reduced key pollutants by over 95% in just two decades. The technologies to meet the new standards are already developed and soon to be introduced in Europe.

Euro VI Standards

Currently the Australian Government is considering whether to introduce Euro VI standards for Heavy Vehicles, which would continue to reduce GHG emissions as well as further reduce other air pollutants. The Department of Infrastructure and Transport has flagged a potential commencement date of 2016 for new vehicles and 2017 for existing vehicles. They state the "technology required to comply with Euro VI and equivalent standards is already well advanced" and that failure to adopt the standards would be "inconsistent with Australia's commitment to harmonise vehicle standards" and risk Australia becoming a "dumping ground" for older technology" (Department of Transport and Infrastructure, 2012). The discussion paper presses the case for this tightening of regulation and suggests that the costs of compliance are likely to be low and able to be passed through to the market with "minimal impact".

Ongoing technological research and development into diesel powered engines illustrates the substantial scope to increase fuel consumption efficiency within the next decade.

Going Forward

Studies within Australia that examined the uptake of more fuel efficient diesel engines found in general a negative cost of abatement, in that initial capital costs are reclaimed through utilizing less fuel (McKinsey & Co, 2008). Because of the short period of time that transport and logistics companies are recuperating the uptake of more fuel efficient engines, and the challenges of rolling out other technologies, diesel engines will certainly be part of any immediate plans to reduce carbon and other GHG emissions.