

FCAI BIODIESEL COMMENT

The Federal Chamber of Automotive Industries, FCAI, representing manufacturers and importers of new vehicles marketed in Australia is pleased to provide the following comment on the Environment Australia Discussion Paper No 6 ; National Fuel Quality Standards – Biodiesel.

It is critical that if biodiesel is to be made widely available to the Australian motoring public that adequate lead time is available to ensure that a distribution network is established specific to the storage and handling requirements of this fuel, and that vehicles may be engineered to capitalise on the performance and emission outcomes that may be derived from the use of biodiesel. Care needs to be exercised in how 'biodiesel' is viewed - whether it is a specific automotive fuel with its own properties and characteristics or whether it is simply a blended diesel product. The recent experience with ethanol in petrol is to be avoided if confidence in biodiesel is to be nurtured.

Further, the development of an Australian biodiesel market should not undermine the emissions outcomes to be expected from new vehicle diesel technology and the foreshadowed improvements in national diesel fuel standards, both of which are implicit in the timetable of the new vehicle emission standards of ADRs 30/01, 79/00 & 79/01 and 80/00 & 80/01 (as relevant to diesel engine vehicles).

The FCAI's view is consistent with the World Wide Fuel Charter (WWFC) in that Fatty Acid Methyl Esters (FAME) including vegetable derived esters (VDE) are acceptable when blended with conventional diesel fuel up to 5% (vol/vol).

In accord with the WWFC consideration of Biodiesel, the FCAI's acceptance of 5% blends of FAME's, including VDE's is conditional upon the FAME(s) on which the biodiesel is based complying with either the EU or ASTM standards and that the blend complies with the WWFC conditions.

FCAI recommends that National Standards for FAME's and Biodiesel blends, based on the EU and/or ASTM, be developed concurrently with a study on the impact of biodiesel on vehicles.

As a pure fuel, or at higher levels in diesel fuel, vehicles need to be adapted to the fuel, and particular care is needed to avoid fuel system component and engine performance problems. In this application, rapeseed, sunflower, palm, soya, cooking oils and animal fats can be used for making FAMEs. Importantly, these blended diesel fuels need to be properly refined and produced to ensure national fuel quality standards for diesel are maintained.

Specifically regarding addition of ethanol to diesel fuel (E-diesel), in line with the WWFC, FCAI is opposed to this principally on the grounds of safety concerns but also vehicle operability issues. The minimum flashpoint of conventional diesel is 61.5°C which classifies it as a "combustible material". However, the addition of ethanol (i.e. to produce E-diesel) which has an extremely low flashpoint of 13°C, reduces the flashpoint of the blend to below

61°C which alters the blend's classification to a "flammable material". There are safety risks to engines, vehicles and fuel distribution facilities, which raises serious safety concerns (such as explosions) for fuel handling, storage and use. Vehicle and engine manufacturers are concerned that E-diesel may damage vehicle parts, especially fuel injectors, and cause other types of vehicle failure due to low lubricity. The fuel's compatibility with the vehicle in other ways, its impact on vehicle emissions and its health effects remain unknown. There is also the impact on fuel consumption because of the lower energy content of ethanol compared to diesel fuel. Therefore, until the many safety, performance and health concerns are resolved and sufficient peer-reviewed research is undertaken, FCAI does not support the practice of adding ethanol to any category of diesel fuel.

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