

Submission to the Department of the Environment, Heritage, Water and the Arts, Regarding the Proposed Management of Diesel/Biodiesel Blends.

I would like to respond to the proposed management of diesel/biodiesel blends document, published on the Department of the Environment, Heritage, Water and the Arts website.

In the preparation of the paper stakeholder feedback was taken from a number of groups. No representations were taken from either biodiesel users or members of environmental lobby groups, both of whom which have legitimate claims as stakeholders in the development of this fuel source.

At the end of 2007 I purchased a new Skoda Octavia diesel vehicle for personal use, with the explicit intention of running the vehicle on pure biodiesel. I have recently become a retail user of B100, supplied from the Fina Fuels, Thomastown and occasionally from SAFF outlets. In operating my car on biodiesel I aim to minimize the environmental impact of using my car. My car is completely compatible with B100 and is warranted for this when sold in Europe, even though no such warranty is available in Australia. This is in spite of the fact that the current Australian standard for B100 (the *Fuel Standard (Biodiesel) Determination 2003*) exceeds that of the current European standard (EU14214).

I am a research biochemist with a PhD in this field as well as Australian and International research experience. I have a strong interest in alternative fuels and renewable energy sources and am well versed in the current research. I am not affiliated with either biodiesel or petrodiesel industry.

I understand the need to address concerns about certainty and confidence for retailers and consumers in terms of the production and use of biodiesel. However this could be achieved without taking the suggested approach that will have a strong adverse affect on the biodiesel industry. I believe that implementation of the paper's recommendations will completely prevent mainstream individual consumers from purchasing biodiesel blends above 5%. It will also put Australia well behind both the rest of the developed world and much of the developing world with respect to the use of this fuel source. I believe this will also adversely affect Australia's ability to uptake other alternative fuel sources that are currently under development, such as recycling of waste plastic to produce diesel and the transformation of biomass to synthetic fuel. I believe the position taken in this paper is completely at odds with a progressive environmental policy and also with the stated position stated on page 4 of removing unnecessary barriers to the development of alternative fuels.

In contrast to the government's position, as stated in the paper, I would suggest:

Amend the Australian diesel standard (the *Fuel Standard (Automotive Diesel) Determination 2001*) to allow the addition of up to 5% by volume of biodiesel,

with the biodiesel component required to meet the biodiesel fuel quality standard (the *Fuel Standard (Biodiesel) Determination 2003*). The resulting blend will be required to be fully compliant with the fuel quality standard for diesel (the *Fuel Standard (Automotive Diesel) Determination 2001* as amended); and

Amend the Australian diesel standard (the *Fuel Standard (Automotive Diesel) Determination 2001*) to allow the addition blends containing up to 50% by volume of biodiesel with the specification that the resulting blend be required to be fully compliant with the fuel quality standard for diesel (the *Fuel Standard (Automotive Diesel) Determination 2001* as amended). Fuel suppliers would be required to label blends as B10, B20, B30 etc. with these labels reflecting the maximum biodiesel component of the resulting blend and containing warnings about use of these blends in non-compliant vehicles.

Continue to allow biodiesel suppliers to sell commercial and retail biodiesel (B100) that meets the biodiesel fuel quality standard (the *Fuel Standard (Biodiesel) Determination 2003*).

In support of this position I would submit the following;

- 1. Blending fuel standards.**
- 2.**

Submissions from the petroleum industry suggesting limiting supply of biodiesel blends >5% to captive fleets seems to indicate that the industry understands that use of higher blends is compatible with many vehicles. It is unclear why captive vehicle fleets should be treated differently from individual users. Consumers are able to differentiate different fuel types and there is no reason to restrict their access.

The FCAI states that its members will not warrant damage caused by blends over 5%. This statement is a furphy as no manufacturer warrants any damage caused by fuel, be that petrodiesel or biodiesel. Consumers are capable of selecting and purchasing the correct fuel for their vehicle and can make their own informed decision on what blend may be appropriate for their vehicle.

The FCAI states: "new vehicles certified to these standards will increasingly use advanced emission control technologies and steps to encourage the use of biodiesel must not undermine the emissions outcomes expected with this modern diesel technology. Similarly, such steps should not limit the availability of even more advanced diesel technology which delivers improved fuel consumption and emissions performance in the future." The establishment of a 5% limit for unlabelled blends and labelling of higher blends allows vehicle manufacturers to specify the level of biodiesel blend that is compatible with their engine. The addition of higher levels of biodiesel significantly reduces the exhaust pipe emissions of carbon dioxide, carbon monoxide, particulate matter and hydrocarbons with decreases in oxides of nitrogen with blends and a 10% increase with B100 (CSIRO report <http://www.csiro.au/files/files/phm1.pdf>, USA EPA report <http://www.epa.gov/OMS/models/biodiesel.htm>).

The use of B100 or higher biodiesel blends therefore aids efforts to decrease exhaust pipe emissions. In terms of emissions controls, the higher oxygen content of the particulate matter produced by biodiesel combustion allows regeneration of diesel particulate filters at lower temperatures (US NREL, <http://www.nrel.gov/vehiclesandfuels/npcf/pdfs/40015.pdf>).

3

Statements from other industry associations would be fully addressed either through adequate labelling of higher blends or by ensuring that all biodiesel blends complied with the petrodiesel standard. Having said this a number of producers have indicated that it is possible to blend biodiesel up to 50% and have the resulting fuel still meet the petrodiesel standard (for example see: <http://www.greenenergy.com/Products/biodiesel.html>).

2. The environment

As discussed above, the exhaust pipe emissions that arise from using from using B100 or higher blends are significantly improved when compared to petrodiesel.

A full lifecycle analysis of Australian biodiesel by CSIRO shows a 40-50% reduction in carbon dioxide emissions for soy and canola derived Biodiesel and over 90% for biodiesel generated from waste oil (<http://www.greenhouse.gov.au/transport/comparison/index.html>).

I am well informed about biodiesel and choose to use it for a number of environmental reasons. These include the lower exhaust pipe emissions, the lower lifecycle CO2 emissions and sustainability for Australian produced biodiesel and the potential that its increased use will help foster other, potentially more sustainable, fuel sources. I believe that my views reflect those of many biodiesel users.

I believe the government should foster the use of renewable resources. I believe that if the recommendations of this paper are enacted the Australian biodiesel industry will suffer and the use of this renewable resource will drop significantly. This would be a serious backward step for the environment and an environmentally irresponsible move.

If you have any questions please email me at