

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

I wish to submit a response to the proposed management of diesel/biodiesel blends document, published on the Department of the Environment, Heritage, Water and the Arts website.

I am a retail user of B100, supplied from the Biodiesel Station, Marrickville. I purchased a new Peugeot 307 diesel vehicle in March 2007 for personal use, with the explicit intention of running the vehicle on pure biodiesel. I have been using B100 for some 12,000km since the Biodiesel Station reopened and high-quality biodiesel became available in Sydney.

I hold a bachelors degree in telecommunications engineering, and am studying toward a PhD in electronics. I am conversant with current research into alternative fuels and renewable energy sources. I have no affiliation with any industry group, either biodiesel or petrodiesel.

My intention in using biodiesel in my car is to make as small an environmental footprint as I am able. Before purchasing my car, I carefully researched both the compatability of biodiesel with the vehicle, and the environmental implications of using biodiesel in the vehicle.

According to the CSIRO, at <http://www.greenhouse.gov.au/transport/comparison/index.html>, a full lifecycle analysis shows that CO2 emissions for biodiesel are around 50% of those for petrodiesel for canola derived biodiesel, and 40% for soy derived biodiesel. My vehicle already boasts a very low level of CO2 emissions, of some 129g/km. By using biodiesel, I am able to reduce that to better than 65g/km.

The US EPA also makes a convincing case for the use of high blends of biodiesel. According to their study, at <http://www.epa.gov/OMS/models/biodsl.htm>, biodiesel emits significantly lower levels of most pollutants compared with petrodiesel (50% for CO2, CO and PM, 70% for HC). The only exception is NOx, which is increased by around 10%. According to the US DoE (<http://www.nrel.gov/vehiclesandfuels/npcf/pdfs/40555.pdf>) biodiesel has a significantly higher flash point than petrodiesel, so is safer to store. It has significantly higher lubricity than low-sulphur petrodiesel. It biodegrades much faster than petrodiesel, so spillages are of significantly less consequence. Pure biodiesel is less toxic than table salt. It burns cooler, prolonging the life of exhaust components, and the soot produced by biodiesel has a higher oxygen component than that produced by petrodiesel, making for lower diesel particulate filter regeneration temperatures (US NREL, <http://www.nrel.gov/vehiclesandfuels/npcf/pdfs/40015.pdf>).

High concentrations of biodiesel are only potentially harmful when used in older vehicles that use incompatible materials, such as butyl rubber seals and fuel lines, in which case the incompatible materials will degrade quicker than with petrodiesel, and when used in vehicles that have been running on petrodiesel for a long time, in which case the increased solvent action of biodiesel frees contaminants from the fuel tank

and lines, that may clog the fuel filter. In both cases, warnings at point of sale are appropriate.

Biodiesel is a renewable, sustainable fuel. It generates significantly lower emissions than petrodiesel, including CO<sub>2</sub>, and provides an additional market for Australian soy, cotton seed and canola. By using biodiesel rather than petrodiesel, we are sending money to Australian primary producers, that otherwise would go to the multinational petroleum industry.

I freely acknowledge that the warranty for my vehicle precludes use of blends in excess of B30. However, considerable research has led me to conclude that this figure is set simply due to a lack of testing at higher blends, due mainly to a lack of availability. I am confident that the increased lubricity, lower exhaust temperature, and enhanced particulate filter regeneration will significantly extend the service life of my vehicle.

I am completely open about my use of biodiesel in my vehicle, having a prominent \_ powered by biodiesel\_ sticker on the vehicle. It is my hope that by doing so, I will have the opportunity to educate both other drivers and the Peugeot dealer at service time about some of the benefits of biodiesel, and hopefully dispell some of the myths that perpetuate regarding the fuel.

I believe that I am representative of a large group of well informed biodiesel users in Australia, who are using the fuel for environmental reasons in the full knowledge of its effects on their vehicles.

My experience in using biodiesel has been overwhelmingly positive. My vehicle runs significantly smoother and quieter on biodiesel than petrodiesel. Aside from a small fuel economy penalty, it is difficult to tell that my vehicle is running on biodiesel. My car starts first-time, every time, and is extremely reliable. I am very confident about the quality of fuel that I am using, because I purchase it from a reputable retailer, and have had no problems with the fuel whatsoever.

I strongly urge the department to continue to allow the retail sale for B100, with appropriate labelling. To do otherwise would be of benefit to nobody, with the singular exception of the established petroleum industry.

Should the availability of B100 be limited, as proposed by the position paper, to captive fleets, then I, and many others in a similar situation would have no option but to source biodiesel from \_ backyard\_ producers. This underground supply of fuel would leave us with fuel that may not be properly processed and compliant with fuel quality standards, risking serious damage to our vehicles, and would also deprive the Australian government of the fuel excise that they currently collect from the legitimate Australian biodiesel industry.

Rather than pandering to the wishes of the petroleum industry, the Australian government must embrace renewable fuels. A minimum level of B5 in all diesel sold in Australia should be mandated, and the government should ensure that blends of B20, B50, and B100 are readily available throughout the country at retail level, for

people such as myself who are aware of the implications and want to do our bit for the environment.

As newer vehicles become increasingly compatible with higher blends, and as the price of crude oil increases, the government should periodically allow increases in the unlabeled biodiesel concentration in diesel fuel. It should also ensure that manufacturers and importers of vehicles and aftermarket replacement components use biodiesel compatible materials in their fuel systems.

Further, both federal and state governments should reward the use of environmentally responsible vehicles, through tax incentives, wherever practicable. Tax loopholes that reward high mileage for leased vehicles must be closed, and users of larger, less fuel efficient vehicles should be discouraged through higher taxes, at purchase, when registering and when refuelling.

To ensure the continued viability of the Australian car industry, local manufacturers must be encouraged to develop smaller, more fuel efficient vehicles. If this is not done, as the price of oil increases, then Ford, Toyota, and Holden will surely follow in the steps of Mitsubishi, leading to massive loss of Australian jobs.

Should you have any questions, please feel free to email me at