

Comments on:

Setting National Fuel quality standards

From:

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BIODIESEL

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2. BACKGROUND

Emissions

Should comment on how a 100,000 tonne/year Biodiesel Plant would reduce Greenhouse Gas Emissions in 1 year. Formula for calculating that?

2.2 Measures for a Better Environment

A number of initiatives with respect to the improved management of transport emissions were announced by the Commonwealth Government in May 1999 as part of *A New Tax System for Australia*.

These initiatives, known collectively as the Measures for a Better Environment, included timetables for Australian harmonisation with international vehicle emission standards (for both petrol and diesel engines) and the reduction of sulfur levels in diesel fuel, as well as foreshadowing the need for changes to petrol specifications. expected emissions reductions from the new standards for diesel vehicles are not compromised by their operation on biodiesel.

Biodiesel needs little, if any engine modification especially on late model engines.

2.5 Key dates

Wherever possible, regulatory measures or standards should be compatible with relevant international or internationally accepted standards or practices in order to minimize the impediments to trade. Compatibility in this context does not necessarily imply uniformity, however.⁶

This is why Biofuel Australia has designed its Biodiesel to meet the U.S. Standard ASTM D 6751. I really think Australia should adopt this Standard and not try to re-invent the wheel. The U.S. is far more advanced than we are in this technology.

2.7.1 Guiding Principles

Given Australia's climatic conditions that really only vary in temperature to a degree, I believe the standard should be set by the Commonwealth not State Governments as this creates political opportunism between states. This could dramatically affect the overall Biodiesel industry.

6. The timetable for the introduction of new fuel standards will be based on Australian requirements. Harmonisation, in terms of timing, will not be based on European or any other regional timetable, except where there is a previous policy decision to this effect or the standard is technology enabling and the need for such harmonisation is clearly demonstrated.

6. The Biodiesel Fuel Standard should be addressed as urgent so as to include Biodiesel in the new Energy Grants Scheme (EGS) to be introduced July 1st 2003

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7. Consideration will be given to setting standards that provide, as far as possible, flexibility in terms of compliance, providing

- flexibility provisions must not impede competition or trade; and
- flexibility provisions must not add significantly to legislative/regulatory complexity or implementation/enforcement costs to Government.

7. This flexibility of the Standard should allow for the blending of Biodiesel with Diesel. Any diesel that has Biodiesel in it has a direct environmental and operational benefit, even at blends of 20% Biodeisel 80-% diesel.

2.8 International biodiesel standards

The problem I see with the 5% amendment is that if a consumer of Biodiesel B100 has to refuel with diesel he could effectively break the law if he can not get B100 where he needs to fuel. I believe the amount of Biodiesel to diesel ratio can be at what ever the consumer sees fit to use. If they are using B100 it should not be any disadvantage to the opera-ability or the environment if they blend any amount of diesel with Biodiesel.

From information I have read about it is my understanding Par BOSCH has done a lot of work with Biodiesel with very positive results.

2.9 The case for a national biodiesel standard in Australia

Comment: What is your view on the need to develop a mandated national fuel quality standard for biodiesel?

I believe it is remissial to have a mandated National Biodiesel Standard that aligns itself with the European or American Standard as all our engines in Australia come from overseas. This mandate will also reduce the problems of the back yard operator making his own Biodiesel that is not to specifications. It would also reduce the problem of an accident happening with these home made back yard operations. The process of Transesterfication has some dangerous processes if it is not properly controlled.

Comment: What is your view on harmonisation of any Australian biodiesel standard with European and/or US biodiesel specifications?

3 BIODIESEL

Comment: Do you consider that an Australian standard for biodiesel should prescribe feedstocks or production technologies, or should the standard only address characteristics and composition of biodiesel?

Due to the varying advances being made into Biodiesel Production I believe there should be a National Standard only. The control of Feedstocks etc. should not be a governing factor if the final result is the standard being met. Different climate would require a different pour point and this can be achieved with different ratios of Feedstocks and catalyst. I think therefore this should be left to the manufacturer to determine.

Table 4.1 - Emission impacts of B20 (soybean-based biodiesel) added to an average base fuel.

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This production in CO₂ emissions could be used to calculate what a 100,000 tonne/year plant would reduce G.G. for KYOTO Protocol. I have always used 75% less G.G. emissions but this still confirms.

The CSIRO analysis of transport fuels states that on a life-cycle basis, biodiesel is more climate-friendly than diesel and biodiesel from vegetable crops is much more so than biodiesel from tallow. The carbon emissions from agricultural production and fertilizer production are less than the embodied emissions from diesel made from fossil fuels.¹

In assessing what additional issues should be addressed the US EPA draft report states that in order to more accurately determine the emission impacts of biodiesel, it would be useful to correlate actual fuel property measurements of biodiesel with emissions rather than simply using broad source categorization as undertaken in the technical report.

This is an important factor for the use of vegetable oil Biodiesel than animal fats.

4.2 Toxicity

These PAH reductions must enhance the immediate introduction of incentives to product and use Biodiesel.

4.3 Lubricity

This reasoning is why you cannot put a limit on Biodiesel because Biodiesel is both a fuel as well as a lubricant. Thus to mandate a minimum of 2% would be within reasoning but to mandate a maximum would be wrong and with no commonsense reasoning. In other words mandate a minimum but not a maximum.

4.4 Biodegradability

These results should support the recommendation for Biodiesel to be promoted as B100 or an additive into sensitive areas such as:

- Marine Parks
- Forests
- Boating Industry
- Mining Industry
- City Buses & Transport

Comment: Do you wish to comment on any aspects of the impacts of biodiesel use raised in this chapter?

From our investigations the NO_x emissions can be reduced or controlled by the tuning of the engine or some sort of catalytic computer on the exhaust system.

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5 BIODIESEL BLENDS

Comment: What are your views on biodiesel blends?

Sections 6, 8, 9 and 10 should be referred to when commenting on this section.

In regards to the standard I agree that the standard should be set for B100 then it does not matter what percentage the blends are. The standard should be that of either European or American or both as stated because most of our engine manufacturers in Australia are from these countries. As for the percentage that should be allowed, or allowed before excise is applicable on blended ratio's it should be excise free on any blend ratio so that the industry has some chance of getting started. Also, I think there should be some percentage mandated into low sulfur diesel fuel to enhance the lubrication quality of LSD. This would fix the lubricating problems that LSD has and also kick start the Biodiesel Industry.

I think the Government should be putting a small excise on gas to cover for the Biodiesel excise free status Gas has had a free run for some 30 years now and it is about time it started to pay its way.

6 BIODIESEL PARAMETERS

Stakeholders are specifically requested to provide comment on:

(a) an appropriate Australian specification for sulfur in biodiesel; and

(b) an appropriate test method for determining the sulfur content of biodiesel.

This is the reason we should mandate a level of Biodiesel in LSD, apart from good lubricity it has a low sulfur content.

The US ASTM D5453 or an authorised equivalent method should be adopted. Most of our fuel standards test are ASTM based so why not use that.

7 ALCOHOL

Stakeholders are requested to comment on the issue of alcohol feedstock for the production of biodiesel and impacts on vehicle emissions and engine operability.

Specifically stakeholders are asked to comment on the need, if any, to specify the alcohol that is used to produce biodiesel (as in the EU standard).

At Biodiesel Moama we have found that the logical Alcohol is Methanol. We have tried both and the Methanol is by far the best alcohol feedstock.

I do not think there is a need to specify a specific alcohol due to the fact that the final Biodiesel product has a specification that limit its alcohol content.

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8 TECHNICAL ANALYSIS OF THE IMPACTS OF BLENDING BIODIESEL WITH DIESEL

Stakeholders are requested to comment on the impacts of blending biodiesel with diesel on engine operability and vehicle emissions.

Section 10 – Vehicle Warranties and Labelling should be referred to when commenting on this section.

We believe there should be a gradual mandate set for the use of Biodiesel as a blend with Low sulphur Diesel as a natural lubricant. If this mandate was set at eg. 2% it would kick industry and also be a cheaper option than what major oil companies are now using.

A Major oil company has already purchased 35,000 litres of Moama’s Biodiesel for testing purposes in the Low sulphur Diesel.

In our fleet of interstate “B” Double tankers we have run blends as well as B100 Biodiesel. The drivers actually commented that the trucks run smoother and power is no different. Our oil sampling when running on Biodiesel shows that we can extend our oil change intervals due to less contaminant in the oil.

Our fleet run Cummins, Caterpillar and Detroit engines and w have never had a warranty claim problem with these manufacturers. They also know about our Biodiesel program.

9 EFFECT OF BIODIESEL ON DIESEL ENGINE OIL

Stakeholders are requested to comment on the impacts of biodiesel on diesel engine oil.

Section 8 – Technical Analysis of the Impacts of Blending Biodiesel with Diesel on blending and 10 – Vehicle Warranties and Labelling should be referred to when commenting on this section.

As we stated before we use a high quality Fuchs lubricant and have had recommendations to extend our oil change periods during the time we were testing Biodiesel.

10 VEHICLE WARRANTIES AND LABELLING

Stakeholders are requested to comment on the issue of biodiesel warranties for use in vehicles in Australia.

Specifically stakeholders are asked to comment on any experience with negotiating warranties for biodiesel use.

I believe that the warranties by the Original Equipment Manufacturers will stand as long as Biodiesel is produced to ASTM or din standards. They eventually changed in the rest of the world and Australia should be no different.