



Biodiesel Fuels Australia

PO Box 5081, Kenmore East Qld 4069, Australia

t: +61 7 3701 7240 f: +61 7 3701 7216

2 January 2007

Ian Campbell
Minister for the Environment and Heritage
Department of the Environment and Heritage
GPO Box 787
CANBERRA ACT 2601

Dear Mr. Campbell,

DIESEL/BIODIESEL BLENDS – DISCUSSION PAPER

At Biodiesel Fuels Australia, we appreciate the opportunity the government has given the biodiesel industry to comment on this important discussion paper. It is critical that the federal government provides clear direction on the use of biodiesel blends to encourage integration of biodiesel into the existing diesel market, and to instill consumer confidence in biodiesel.

Our major recommendations in response to this discuss paper are as follows:

- The existing diesel fuel standard be expanded to include biodiesel blends between one and five percent, and labeled “may contain up to 5% biodiesel”,
- Biodiesel blends between six and twenty percent made from on-spec diesel and on-spec B100 biodiesel be allowed and labeled “may contain up to 20% biodiesel”,
- Testing of blended fuel made from on-spec diesel and on-spec B100 biodiesel be minimised to a small number of critical tests,
- Comprehensive fuel testing is important, but also very expensive, and is a barrier to entry for smaller biodiesel producers and petroleum distributors producing blends,
- Strict labeling of blend percentages such as “contains exactly X% biodiesel” be avoided to allow blend ratios in on-spec fuel to be varied in line with seasonal conditions and biodiesel spot prices,
- B100 be labeled “B100 pure biodiesel”.

A major education campaign to explain what biodiesel is, and its benefits, to Australian diesel users, is still in its infancy. Blended fuel standards and clear labeling of diesel, diesel/biodiesel blends and B100 biodiesel will greatly assist in this effort.

In finalising diesel/biodiesel blend standards, we urge the federal government to keep in mind the promise of biodiesel as an environmentally friendly, near carbon-neutral fuel, ideally produced in Australia from Australian feedstocks. Encouraging the uptake of biodiesel in Australia will only benefit Australia’s environment and balance of trade in the long term.

Biodiesel Fuels Australia looks forward to contributing to this important debate on biodiesel blends further as the federal government moves towards finalising biodiesel blend standards.

Kind regards,

Dane Muldoon

Research & Development
Biodiesel Fuels Australia



Responses to questions presented in “Setting National Fuel Quality Standards - Standardising Diesel/Biodiesel Blends”

Your comment is invited on management Options 1 and 2.

• Should biodiesel blends be capped at B5 and meet the diesel standard?

No; at Biodiesel Fuels Australia we feel that the biodiesel industry will suffer greatly if the biodiesel content in biodiesel/diesel blends is capped at five percent. Future consumption of biodiesel will be artificially limited by this small percentage, severely restricting the biodiesel industry’s ability to expand and grow. Further more, acceptance of B100 as an alternative to diesel is likely to be hampered by the perception that biodiesel is not safe enough to be blended with petroleum diesel at levels higher than five percent.

Biodiesel Fuels Australia does support amending the diesel standard to allow for up to five percent by volume of biodiesel with the recommended conditions, but only in addition to allowing higher biodiesel blends as well.

• Should flexibility be allowed for density (or any other quality parameter)?

N/A – we find a five percent cap on blends to be an unacceptable option.

• Is Option 1 or Option 2 your preferred management option?

No; see response above to Option 1.

However, we do suggest that the existing petroleum diesel standard be updated to include and accept biodiesel blends between one percent and five percent. This will encourage the major oil companies to use small percentages of biodiesel when it is economically advantageous for them to do so without having to modify their existing distribution infrastructure or testing regime.

Only when biodiesel can positively contribute to the bottom lines of the major oil companies will they fully embrace biodiesel; environmental responsibility is no more than a negligible factor in their decision to use and promote biodiesel. This can be clearly seen by the fact that the major oil companies fell dramatically short of their federal government submitted Biofuels Action Plan estimate of biofuels uptake in 2006 by a factor of four¹.

Once biodiesel blends of B1 – B5 are incorporated into the diesel standard, diesel at the pump should be labeled “may contain up to 5% biodiesel” in a similar fashion to the labeling scheme in Germany.

Your comments are invited on management Options 3 and 4.

• Should a full B20 fuel quality standard be developed as outlined in Option 3?

No; we feel that while B20 is an ideal blend of petroleum diesel and biodiesel to standardize on, it is unnecessary, and indeed harmful, to over-regulate the industry and price biodiesel blends out of contention through over-testing. Comprehensive fuel testing is expensive and effectively creates an artificial barrier to entry for smaller biodiesel producers and petroleum distributors who would like to bring a biodiesel blend to market.

¹ On the 22nd of December 2005, the Prime Minister’s office released a press release stating the oil industry’s Biofuels Action Plan predicted biofuel uptake of between 89 million litres and 124 million litres in 2005. On the 10th of December 2006, the Courier Mail reported that Renewable Fuels Australia had estimated that the major fuel retailers would have used just 24 million litres of the biofuels by the end of 2006.



A leading fuel testing agency, Intertek Caleb Brett, Australia, recently provided Biodiesel Fuels Australia with a quote for biodiesel analysis to the Australian Standard, which was in excess of \$2,500 inc GST². To put this in perspective, comprehensive testing of a 25,000L tanker of blended biodiesel product will add 10c per litre to the price. If both B100 biodiesel and then a B20 blend have to be tested at this cost, biodiesel is likely to be seen by the major oil companies as too expensive and therefore, too hard.

While testing is absolutely critical for fuel, hitting the biodiesel industry with the cost of comprehensive testing after a blend has already been prepared from on-spec petroleum diesel and on-spec B100 biodiesel is a major financial burden. In countries such as the United States, biodiesel production and usage is being led by the agricultural industry; over-regulation in Australia will lead to biodiesel being too expensive for anyone but the major oil companies who do not have the same natural incentive to promote biofuels.

• If so, which parameters should be included?

N/A – we see over-testing as a barrier to entry for smaller biodiesel producers and petroleum distributors to bring to market B20 blends produced from on-spec diesel and B100.

• Should a simplified B20 standard be developed as outlined in Option 4?

Yes; allowing biodiesel blends up to B20 (B6 – B20) is a good compromise between the promise of biodiesel as a environmentally friendly, renewable fuel; the economics of petroleum distribution; and the needs of Australian diesel users.

As long as the blend is produced from B100 that meets the Biodiesel Fuel Standard, and petroleum diesel which meets the Diesel Standards, a small number of post-blend tests is sufficient to ensure that the end user will receive consistent, high quality product that they can have confidence in.

• If so, which parameters should be included?

Post-blend testing for blends between B6 and B20 should be kept to at most four critical tests to confirm that a blend produced from B100 that meets the Biodiesel Fuel Standard, and petroleum diesel that meets the Diesel Standards, has been successful and is ready for distribution and sale.

While Biodiesel Fuels Australia does not have the technical experience in-house to confidently recommend a sub-set of the ten tests presented in Table 7 of the Duncan Seddon & Associates report, we would like to offer the following four tests as a starting point for the discussion which will need to take place to finalise the testing regime.

Water, Sediment and Solids	ASTM D2709	0.05 vol% (maximum)
Cold Filter Plugging Point	ASTM D2500	Report value
Oxidative Stability	ASTM D2274	25mg/L (maximum)
Total Acid Number	ASTM D664	0.80mg KOH/L (max)

² Tests included in Intertek Caleb Brett, Australia's quote for biodiesel analysis to the Australian Standard were ASTM D5453, ASTM D1298, ASTM D1160, ASTM D874, ASTM D445, ASTM D93, ASTM D4530, ASTM D2709, ASTM D130, prEN 14103, ASTM D4951, ASTM D664, EN 12662, ASTM D6584, ASTM D6584, ASTM D6890, prEN 14112, prEN 14108, prEN 14109 (Na, K, Group I), prEN 14538 (Ca Mg, Group II), prEN 14110, ASTM D2500, IP 309, and IP 387.



Biodiesel Fuels Australia

Your comment is invited on labeling requirements for B5.

• Should B5 blends be labeled?

Yes; as outlined above, we feel that the petroleum diesel standard should be expanded to include B1 – B5 biodiesel blends with diesel at the pump then being labeled “may contain up to 5% biodiesel”.

• If so, is a statement that the fuel “contains 5% biodiesel” or “up to 5% biodiesel sufficient?”

Diesel should be labeled “may contain up to 5% biodiesel” as opposed to “contains (exactly) 5% biodiesel”. It is important that a strict “contains exactly 5% biodiesel” labeling scheme is not used for fuel that meets the diesel standard as blend ratios may need to be slightly modified during different months of the year to account for seasonal temperature changes and fluctuating biodiesel spot prices.

Your comment is invited on labeling requirements for higher blends of diesel and biodiesel.

• Should higher blends and neat biodiesel (B100) be labeled?

Yes; B20 biodiesel blends should be labeled as outlined below.

Yes; B100 should be labeled as “B100 pure biodiesel”. This will successfully distinguish B100 biodiesel from biodiesel blends and petroleum diesel in a fashion that will both enhance the standing of B100 as a “pure” fuel and give the consumer clear advice regarding the fuel.

Further, some of the additional benefits of biodiesel should be included in B100 labeling such as:

- Biodiesel is biodegradable and non-toxic,
- Biodiesel has lower life-cycle carbon emissions than petroleum diesel.

• If so, is statement of the biodiesel content (eg “this fuel contains 20% vol biodiesel”) sufficient?

No; B20 should be labeled “may contain up to 20% biodiesel” as opposed to “contains (exactly) 20% biodiesel”. It is important that a strict “contains exactly 20% biodiesel” labeling scheme is not used for fuel that meets a B20 standard as blend ratios may need to be slightly modified during different months of the year to account for seasonal temperature changes and fluctuating biodiesel spot prices.

• Is additional information required?

Yes; it is important that consumers are allowed to make informed choices about their fuel consumption including being aware of any perceived risks around using a biodiesel blend. Biodiesel Fuels Australia feels that allowing consumers to make informed choices will only strengthen confidence in biodiesel in the long term.

• If so, what information should be included on a label for higher blends of biodiesel?

For B20 blends we agree with the following recommendations put forth in the Duncan Seddon & Associates report:



Biodiesel Fuels Australia

- The user be advised that the biodiesel blend should be used within a specified period (eg. Within one month of purchase),
- The user of BXX to be advised of the propensity of the fuel to pick-up extraneous matter and to change filters regularly,
- The user be advised of the minimum operability temperature of the blend,
- The user to be advised to check with the engine manufacturer of the suitability of a BXX blend for the owner's vehicle.

• **Additional comments**

We agree with the other recommendations of the Duncan Seddon & Associates report that:

- In order to achieve homogeneity and consistency, the blending of certified B100 and diesel should be performed with mechanical agitation rather than splash blending,
- BXX should be stored and transported in new or cleaned tanks and pipelines to ensure minimum pick-up of sediment. This should be backed by, as appropriate, in-line filters in the delivery system,
- The storage and use of BXX should be less than six months from its date of blending and certification.