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Dear Daniel

NATIONAL STANDARD FOR BIODIESEL – COMMENTS FROM WA DEPARTMENT OF ENVIRONMENT

The use of biodiesel provides an environmental benefit in terms of a reduction in noxious and greenhouse gas emissions from diesel vehicles, provided the biodiesel is of sufficient quality and allows the use of emerging vehicle technologies as they become available. Variations in some of the key parameters in biodiesel can lead to operability issues and increased emissions resulting from incorrect operation or premature engine wear.

A mandated national fuel quality standard will ensure that operability issues are avoided and the potential environmental benefits of biodiesel are achieved. Furthermore, a standard will allow confidence in the use of biodiesel and provide stability necessary to promote a viable biodiesel industry.

As future Australian Design Rule (ADR) emission standards are derived from the United Nations Economic Commission for Europe (UN ECE) emission standards, alignment of Australian biodiesel standards to these would seem appropriate.

However, as a large proportion of diesel vehicles are imported into Australia from the US, as well as Europe, the US standards may also be appropriate to the Australian context. The final choice of whether to align with European or US standards is not considered critical, provided the final standard addresses other concerns, such as operability and emissions performance of biodiesel.

Prescription of feedstocks for biodiesel production is not considered necessary provided the specifications are not dependent on the feedstocks used for production.

There is reported to be a wide variation in emissions from biodiesel vehicles in the Paper. However, generally there is a reduction in particulate matter (PM), hydrocarbons (HCs) and carbon monoxide (CO) when compared to 500 parts per million (ppm) sulfur diesel, as is the current Australian standard.

The small increase in oxides of nitrogen (NOx) is of concern in urban airsheds due to its contribution to ozone formation. However, this appears to be partially offset by the decrease in ozone forming potential of HCs from biodiesel, which is around half that of diesel. This will require further examination on a case by case basis as further trials are held in Australia.

There also appears to be a lack of information on emissions from vehicles operating on biodiesel compared with ultra low sulfur diesel (ULSD) (50 ppm sulfur) with exhaust after treatments such as exhaust gas recirculation, PM traps or NOx absorbers. As vehicles with these exhaust after treatments enter the Australian fleet, more information will become available.

Provided a standard is set for neat biodiesel, the quality of blends will be controlled, as it does not seem practical to develop standards for different blend percentages of biodiesel and diesel. It would be appropriate for biodiesel blends, due to change in diesel properties, to be required to meet the current standards for diesel as set out in the Determination.

Due to the cost of biodiesel, use in blends to enhance properties of ULSD seems most likely, combined with niche markets such as marine (due to the high biodegradability of biodiesel).

Developing limits on the amount of biodiesel allowable in a blend seems appropriate. When developing percentage limits, consideration will be required to ensure higher blends do not have adverse operability or emissions impacts.

One of the primary concerns with blends would be the impact on fuel efficiency. Higher percentage blends will have lower fuel efficiency compared to diesel. This can be overcome by labelling of all biodiesel blends and the percentage biodiesel they contain. Excise arrangements will also influence the cost of a blend compared to neat biodiesel or diesel.

The DoE is strongly in favour of labelling of all biodiesel blends through provisions introduced in response to the issue of labelling ethanol in petrol / ethanol blends.

The DoE is not in a position to provide comment on the individual parameters related to biodiesel (Section 6).

Thank you for the opportunity to comment on the development of a standard for biodiesel. Please contact James Forrest on 9278 0638 or james.forrest@environ.wa.gov.au if have any queries related to this submission.

Yours sincerely

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