

**Western Australian Department of Environment and Conservation
Response to Department of Environment and Heritage Standardising
Diesel/Biodiesel Blends Discussion Paper**

The Western Australian Department of Environment and Conservation (DEC) is pleased to make the following comments on the Standardising Diesel/Biodiesel Blends Discussion Paper.

DEC supports the development of the biodiesel industry. To ensure the continued growth of consumer and vehicle manufacturer confidence in diesel/biodiesel blends it is crucial to ensure only blends of the highest quality are available. DEC consider this is best achieved by the development of consistent national diesel/biodiesel standards.

DEC believe that consistent national diesel/biodiesel standards can provide quality, price and reliability benefits. DEC also believe that diesel/biodiesel standards will bring greater compliance in the fuel supply system and assist in addressing fuel substitution and adulteration.

In terms of the specific questions raised, DEC makes the following comments.

Options 1 – B5 limit and Option 2 – B5 limit with density waiver

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

DEC preferred option is for biodiesel blends to be capped at B5 and meet the diesel standard, as it allows for certainty and confidence in lower level diesel/biodiesel blends to be generated, which may lead to subsequent acceptance of higher blends. In regards to warranty issues there is currently limited support from diesel vehicle manufacturers for the use of diesel/biodiesel blends other than low levels (<5%) in light duty diesel vehicles in the Australian market.

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

DEC believe flexibility be allowed for density provided original equipment manufacturers (OEMs) accept a B5 density waiver. OEMs have expressed concern regarding the use of higher blends (>5%) in the existing fleet due to issues concerning vehicle compatibility and the potential for increased emissions.

Biodiesel produced from different sources has different properties. This is reflected in the biodiesel standard with the density parameter. Density for B100 is specified as being between 860 - 890 kg/m³.

There is precedence for the flexibility for density of B5. The current practice in the US and Canada does not specify a density limit. However, in the EU, blends of biodiesel up to 5% include the density parameter for diesel.

The New Zealand biodiesel standard states that biodiesel has a higher density than mineral diesel but this density is not related to the presence of heavy molecules which result in poor combustion and the generation of PM. Therefore in regards to biodiesel higher density is not as undesirable a property as in mineral diesel.

Is Option 1 or Option 2 your preferred management option?

DEC preferred management option for B5 is option 1 – B5 limit, due to issues concerning vehicle compatibility and the potential for increased emissions. Option 2 is also acceptable to DEC provided OEMs are comfortable with a B5 density waiver.

Option 3 – B20 limit with a strict B20 standard and Option 4 – B20 limit with a simplified B20 standard

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

Blending two on-specification fuels such as automotive diesel and biodiesel (B100) does not guarantee the fuel quality of the resultant blend. It is the opinion of DEC that a B20 fuel quality standard is necessary. A B20 standard could, in part, resolve some of the serious consumer and vehicle manufacturer concerns related to some current diesel/biodiesel blend marketing practices.

For effective regulation of B20 there must exist acceptable test methods for each of the parameters in any specification. DEC believes the ASTM specifications and test methods for B100 and diesel should serve as the basis for any B20 specification. In addition the determination of the biodiesel blend level should be incorporated into the test methods.

DEC is not in a position to comment on the whether a strict or simplified B20 standard should be permitted. However, in order to provide certainty to the market extensive trials and testing of various B20 quality standards are crucial in gaining OEMs acceptance in the longer term.

Should a 'B5 only' cap be adopted or should both B20 and B5 blends be permitted?

It is the opinion of DEC that both B20 and B5 blends be permitted. DEC support for B20 blends relies on OEMs acceptance of warranty issues associated with the use of diesel/biodiesel blends other than low levels (<5%).

Are there other management options that should be considered?

The storage, handling and distribution systems for B20 may require extensive upgrades or replacement. Biodiesel although hydrophobic may contain small quantities of water which may have implications for fuel infrastructure. Potential rusting could result in leakage to soil and groundwater. DEC considers that biodiesel is less of a contamination concern than standard diesel as long as distribution infrastructure is maintained such that any leakage is identified and prevented.

The intention of the *Fuel Quality Standards Act 2000* is to promote the introduction of cleaner burning fuels. B20 will produce less particulate and carbon monoxide emissions than conventional diesel, but studies suggest there will be a slight increase in NO_x emissions, an important precursor to ground level ozone formation.

In regards to NO_x emissions from B20, DEC preferred management option is for a NO_x neutral fuel to be produced, that is a B20 which produces the same NO_x emissions as conventional diesel.

Refiners and blenders can produce a NO_x neutral fuel by either selection of low aromatic diesel streams or by adding cetane improvers. Adding cetane improvers is suggested as

the most cost effective and is generally applicable to a wider range of biodiesel producers and blenders.

Should B5 blends be labelled?

As there appears to be limited warranty issues associated with the supply of B5, DEC preferred management option would be not to label B5 blends, as is the case for other fuel additives. If any OEMs identify they will not honour warranties etc with regard to B5, then B5 may be required to be labelled to inform consumers owning such vehicles.

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

If B5 blends are to be labelled the statement that the fuel “contains 5% biodiesel” or “up to 5% biodiesel” is sufficient.

Should higher blends and neat biodiesel (B100) be labelled?

DEC believe labelling of higher biodiesel blends (above B5) is necessary to assist consumers in making appropriate fuel choices and could be relatively straightforward, inline with the simplified ethanol label. No mandatory labelling requirements for biodiesel blends above B5 could lead to serious consumer protection issues and lack of certainty for claimants of fuel tax credits.

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

If B20 blends are to be labelled the statement of the biodiesel content (e.g. “this fuel contains 20% vol biodiesel”) is sufficient provided OEMs acceptance of warranty issues associated with the use of B20.

Is additional information required?

If OEMs do not accept warranty claims associated with B20 additional information would be required such as “Check with your vehicle manufacturer before using this fuel in your motor vehicle”.

Thank you for the opportunity to provide comment on this Discussion Paper. If you have any questions or require clarification in relation to this submission, please contact Karl Carrabotta on (08) 6467 5333.

Yours sincerely

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