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Office of Biofuels  
Division of Resources & Energy  
Trade & Investment NSW  
GPO Box 3889  
Sydney NSW 2001  
Sent via email: [biofuels@industry.nsw.gov.au](mailto:biofuels@industry.nsw.gov.au)

Dear Minister,

**Re: Ethanol Mandate Consultation Paper**

On behalf of its members, the Biofuels Association of Australia (BAA) appreciates the opportunity to provide comment on the options presented in the *Ethanol Mandate Consultation Paper*.

As background, The Biofuels Association of Australia ('BAA') is the peak industry body representing biofuel producers, marketers, retailers and others with the purpose of providing leadership and facilitating the building of a sustainable and economically viable Australian biofuels industry, consistent with national and community interests and environmental standards. Formed in 2006, the BAA is proud to have major Australian industry participants as members, providing valuable input and insight across the supply chain.

The BAA works closely with its members and broader stakeholders to identify opportunities to advance the uptake of biofuels in Australia's liquid fuel market, and to lead the way in helping to educate consumers about biofuels, their use and benefits. An Australian biofuels industry has broad societal benefits in the areas of economic development, health, environment, innovation and energy security and a brief summary of these benefits is attached in Appendix 1 for your reference.

**BAA Comments on the Options for Increasing Ethanol Consumption**

**Option 1: Broadening the Mandate**

The BAA is supportive of the mandate being broadened to include all retailers in New South Wales. The BAA believes that there are very few genuine exceptions that should be applied to the requirement of providing an Ethanol based fuel option.

**Option 1A: Major Retailers are defined in the Act as those controlling more than 20 service stations. The qualifying number of sites controlled should be reduced, for example to five.**

The BAA proposes that if this option were to be pursued that the definition should be tightened to allow for broader application of the mandate in NSW. The number of sites should be reduced to Three (3) and where a retailer has less than Three (3) sites, if their service station(s) can accommodate three (3) liquid fuels then one offering should be E10.

Unfortunately much of the marketing of fuels in NSW has played on the fears of motorists rather than properly presenting the fuel as a quality fuel that is safe for vehicles to use. By requiring the vast majority of service stations to provide an E10 option will level the playing field for EBFs to be marketed in NSW and remove the negative advertising campaigns that some retailers have been undertaking.

The only other exception that should be considered for exemption is in the border areas, where freight distortions may have a competition effect. Logistics costs play a significant role in the pricing of fuels and distortions may occur around borders if EBF fuels are unavailable for shipment from trans state locations.

**Option 1B: Require all service stations to offer an ethanol blended product. This could be phased in over a reasonable timeframe, and an exemption framework would need to be developed with suitable criteria.**

The BAA supports this option. Where exemptions are offered the opportunity for operators to look to bend the compliance rules exists, and as has been evident over the past 2 years, exploit loopholes in the wording to in fact reduce the number of service stations offering product. This is evidenced by the NSW Office of Biofuels own statistics which have shown a further slide in compliance in the December quarter of 2013. As stated previously, if all retailers are required to sell the product, then misinformation about the efficacy of the product should reduce and consumer acceptance grow. This consumer acceptance will not grow without strong advocacy from the government and industry as to the benefits and fitness for us of EBFs.

**Option 1C: A new provision to require all service stations that sell more than a specified minimum annual volume of petrol to offer E10. This requirement could be phased in over a period of time by progressively reducing the volume threshold.**

This option is not supported by the BAA as an option of choice. The BAA considers that the administrative burden that this type of legislation would create would be significant. Keeping track of throughput as entities change name and structure, would add to the complications of an already significant task. Alternatively, by doing a survey of each service station and where more than 2 tanks exist, requiring the station to offer an E10 option would be simpler to determine and easier to administer. Where service stations are non compliant a 12 month compliance program should be established and where compliance is not met at the end of the period, penalties should be further increased.

For all of the options put forward, the BAA considers that it is necessary to have strong penalties for non-compliance in place. Without strong penalties it is likely that non-conformance will still be the order of the day. The BAA suggests that these penalties get reinvested into the industry to help it grow.

These funds could be used to educate and provide a better service to the consumer by being able to provide the following:

- Provide a national hotline service to consumers to answer questions about whether they can use biofuels in their vehicles.
- Establish educational services in collaboration with TAFE and other educational institutions to increase knowledge about biofuels use and manufacture within the tertiary and automotive trade sectors.
- Establish a sustainability standard for all biofuels and work with government to set standards for compliance.
- Provide technical and market support to potential new biofuel entrants to increase investment in the sector.
- Extend research outcomes to industry participants and encourage the take up of new technologies.

The BAA as the peak body could coordinate the provision of these services to the community in conjunction with government.



## Option 2 – Premium Ethanol Blends

Currently the petroleum sold in Australia does not meet the standards set out in Category 3 of the Worldwide Fuel charter<sup>1</sup> on a number of criteria including sulphur (30ppm). Whilst the EU, US and Japan are lifting standards to Category 4 and 5 levels (10ppm sulphur), Australia falls short in the health critical area of sulphur content with the existing fuel standards allowing for 150ppm content vs the Category 3 standard of 30ppm. Lowering the sulphur content of fuels has numerous health advantages by removing carcinogenic toxins that also aggravate respiratory conditions like asthma. Lower sulphur petroleum will also extend the life of motorist's catalytic convertors and enable some consumers to switch to lower octane fuels and save money. Many imported vehicle specify the use of premium fuels not because they require the higher RON/MON (octane) rating, but because the technologies in use are not tolerant of higher sulphur fuels.

With the reduction in refining capacity in NSW, the state will effectively become an imported petroleum market. This provides the opportunity to utilise the strengths of biofuels to accelerate the pathway to conforming to the Worldwide Charter on fuels, reducing barriers to trade and potentially lowering the cost of fuel to consumers. By changing the base Australian Fuel Standard specifications for RULP, there is also an opportunity to increase competition in the premium fuels market, through the utilisation of ethanol blending and put downward pressure on PULP prices. PULP has been increasing in market share as more European cars enter our market and margins in this area have increased to double that of the RULP products according to a recent ACCC report. If the fuel standard for RULP was raised to a 92RON and 84MON standard, this would allow for AS compliant PULP ethanol blends, increasing the competition in this part of the market. As a final note ample capacity currently exists in Asian refineries to supply 30ppm conforming ULP to the Australian market.

**Option 2A: A new provision to require E10 blended in NSW to conform with the PULP standard. Unblended RULP and PULP and higher octane ethanol blend petrol could still be sold, as could the current E10 blend where it is imported as blended product from interstate.**

**Option 2B: A new provision to require all primary wholesalers to offer at least one premium ethanol blend petrol. Current E10 blends, RULP and PULP could still be sold.**

The BAA does not fully support either alternative presented, but would strongly support a move to change the national fuel standard to bring Australian fuels in line with Category 3 of the Worldwide Fuel Charter.

Currently Australian ULP has to meet a 150ppm sulphur content standard which is some five (5) times higher than the category 3 standard. It is the BAA understanding that should the sulphur content of fuels be reduced then many of the imported cars classified as only being able to be run on premium fuels, would in fact be able to happily use E10. Whilst these vehicles can utilize higher octane fuels, it is the intolerance to sulphur that generally requires overseas automotive manufacturers to specify PULP fuels to be used in their vehicles.

If sulphur contents were lowered this would open up this part of the market to greater competition and put strong downward press on PULP prices as the existing 15-17cpl differential would be hard to justify as a consumer. Lifting the RON rating of ULP to 92 in addition, should also be considered as it may reduce confusion for consumers by being able to promote and sell all E10 blended fuels as premium fuels.

Removing confusion around warranties and vehicle compatibility with biofuel blends, would go a long way to building consumer confidence. Working with the automotive industry will be important in instituting any change to fuel standards, ensuring alignment between the timely development of fuel standards and effective communication to consumers about their real fuel choices and vehicle warranties.

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<sup>1</sup> Auto Alliance: Worldwide Fuel Charter (5th Edition): 2013 <http://www.autoalliance.org/auto-issues/fuel-publications>

## Summary

As indicated the BAA supports the NSW government in broadening the ethanol mandate by requiring all service stations to offer E10 blended product in conjunction with changing fuel standards to provide ethanol blended fuels the opportunity to compete head to head with premium fuels and lower the overall cost of fuel to the consumer. The BAA also urges the NSW government to reconsider removing ULP from the market entirely as was initially envisaged by the NSW mandate as the % of non-compatible cars in the vehicle fleet is continuing to steadily decrease.

The BAA believe that the leadership shown by the NSW government in this regard is setting the standard for clean fuels in Australia and providing for better health outcomes for all people living in New South Wales.

We trust that the BAA's submission provides an understanding of the industry's views in relation to the issues raised in the NSW Ethanol Mandate Consultation Paper and we thank the Department for an opportunity to contribute to the debate.

The BAA would appreciate the opportunity to discuss the matters raised in further detail with you, and we hope that this may be possible in the coming weeks.

Yours sincerely,



**Gavin Hughes**  
CEO  
Biofuels Association of Australia



**Garry Mulvay**  
Chairman  
Biofuels Association of Australia

## Appendix 1: Benefits of an Australian Biofuel Industry

### *Economic Development*

Today more than 98 percent of the energy used in Australia's transportation industry still derives from fossil fuels. With Australia facing significant change in terms of the make-up of industries that once drove our economy, the burgeoning biofuels industry is a relatively new player, which if fostered can contribute future investment and jobs.

The BAA recently commissioned Deloitte Access Economics to undertake a study on the economic contribution of the Australian Biofuels Industry. The interim results of this report show that, net of the Cleaner Fuel Grants and Ethanol Producer Grants paid, the industry generated an economic contribution of approximately \$427 Million and provided for about 3,180 FTE jobs as a result of the industry's activities and that this could grow to \$554 Million and 4,002 FTE jobs should the industry utilise its installed capacity. Given that the biofuels industry represents just 1% of fuel sales, we believe this demonstrates the significant economic potential that this industry has to contribute to Australia's future.

The Australian biofuel production supports investment and jobs in regional Australia in communities including: Barnawartha, Largs Bay, Picton, Nowra, Maitland, Dalby, Sarina, Cressy and Tom Price. A number of projects are under consideration for the future and Australia's biofuels demand and policy settings will be key factors influencing their commercialisation. Additionally, the BAA believes that there is an opportunity for a domestic biofuels industry to provide an alternative revenue stream for the agri-sector, allowing it to strengthen its resilience to ever changing environmental and economic conditions.

### *Export*

Globally, biofuels is a growth industry with making up about 10% of the global supply. Today, Australia exports biofuels to destinations including the US and Asia, and we are increasingly being considered by overseas investors interested in establishing facilities for future export. This activity underlines the industry's international competitiveness when markets are not distorted. The potential future trade growth is not restricted to the fuels alone – there will also be opportunities for Australia to export its significant scientific and research skills, technology developments and human talent.

### *Health benefits*

Ethanol and biodiesel blends can have a beneficial impact to air quality, and as a result human health due to the reduced pollutant gas emissions relative to fossil fuels. Air quality, particularly in and around our major cities, ports, tunnels and airports could be improved and there is opportunity for increasing uptake of biofuels to have a positive impact on health outcomes and reduce national and state health budget costs. The Australian Medical Association noted in its submission to the 2013 Senate Inquiry into the "Impacts on Health of Air Quality in Australia" that the costs associated with motor vehicle emissions alone are estimated to be between \$600 million and \$1.5 billion per annum.

In particular, a significant risk to human health is posed by vehicle particulate emissions, especially fine particles known as PM2.5. Many economies have taken direct action in setting their fuel standards to limit particulates through requiring biofuels to be part of the standard fuel blends.

A CSIRO and Orbital study in 2008, "Evaluating the Health Impacts of Ethanol blend Petrol", concluded that there would be a "health benefit to Sydney and the Urban Australian population (taken as Sydney, Melbourne, Brisbane and Perth) arising from a move from neat ULP to ethanol blends in spark-ignition vehicles", noting that the "overall quantified health benefit of using ethanol blends is overwhelmingly dominated by reductions in particulate matter".

Biodiesel use in underground mines could also be a significant opportunity for improved OH&S outcomes. In a CSIRO paper titled, "Biofuel: potential use in the mining industry for the reduction of greenhouse gas and particulate matter emissions", it was noted that "the occupational exposure to particulate matter from diesel

exhaust can be significantly higher among underground mine workers than it is for their above-ground counterparts.” While a number of strategies are available to reduce exposure to vehicle exhaust or equipment emissions, not all may be suitable. As a result, the use of biodiesel as a “drop-in” replacement for diesel use in underground mining operations provides a viable option for companies to reduce the exposure of their people to harmful particulates and other toxic emissions.

Overall, the BAA believes that the net public health benefit of using blended fuels is positive and should be a significant consideration when analysing future policy settings to advance the uptake of biofuels in Australia.

### *Environment*

The environmental benefits of biofuel use have been widely documented. The reduction in greenhouse gas emissions resulting from the use of biofuels and biofuel blends is closely aligned with the Government’s “Direct Action” approach to climate change.

While there have been concerns due to the use of food crops as feedstocks in some countries, in Australia producers are using environmentally sustainable feedstocks from waste streams such as used cooking oils, tallow, wheat starch, molasses and sorghum. These feedstocks do not impact the affordability or availability of food within Australia.

Whilst the notion of first and second generation fuels once was central to the debate, ‘Advanced Biofuels’ has finally become the centre of attention, requiring fuels to be defined by their potential for lifecycle GHG abatement and their conformance to a set of sustainability criteria. Indeed, the issue of sustainability is of paramount concern to the Australian industry, and the BAA is the lead participant in Australia’s involvement in the development of an ISO Sustainability Criteria for Bioenergy.

### *Technology and Innovation*

The biofuels industry is an incubator for innovation and is the basis on which to foster new technology and R&D. Our local producers are constantly looking for ways to improve the efficiencies within their processes, via research into new enzymes or treatments to improve the yields and quality of the biofuel they produce.

Looking to the future of advanced biofuels, several Australian Universities and CSIRO have active research programs and many are at the forefront of research into new feedstocks, such as algae, cyanobacteria, sorghum, lignocellulose, pongamia and mallee. Importantly, the issue of how to manage biomass aggregation to allow cost effective processing of these feedstocks into fuel is also a critical area of required study. Leveraging Australian industries that already aggregate biomass of course is a short pathway to piloting these new technologies.

The development of a sufficient supply of renewable feedstocks is of particular interest to the aviation industry, both in Australia and globally. The key challenges remain the cost and availability of feedstocks and refining capability. The global industry is keen to find ways of producing sustainable quantities of renewable jet fuel, at an acceptable cost. This is an area where there is strong customer demand for the product, and globally, many countries are urgently looking at ways that they can take advantage of what could become a significant industry in future. Australia is well positioned to take a lead in the development of pathways to renewable jet fuel and this is evidenced by investment in local initiatives such as the Australian Initiative for Sustainable Aviation Fuel (AISAF) and Queensland Sustainable Aviation Fuel Initiative (QSAFI), along with partnerships between companies such as Qantas and Shell, and Virgin Australia, Brisbane Airport Corporation and SkyNRG (Brisbane Bio port).

For Australian biofuel production, increased investment in the development of advanced, renewable economically viable feedstocks is critical to the growth of the industry.

## *Energy Security*

An established industry can contribute to energy security as blending extends Australia's fuel reserves. Indeed, energy security concerns have driven many countries to introduce policies to actively encourage the development of their biofuels industry. Biofuels capability in Australia is also an area being closely watched by Defence personnel, particularly as our US allies are moving to significantly increase the use of renewable fuels in Navy vessels. Interoperability is a key factor to consider for the Australian Navy, as often shared supply chains are used for fuel.