

# Submission

Prepared for:-

**Project Manager-Queensland biofuel mandate**

[biofuels@dews.qld.gov.au](mailto:biofuels@dews.qld.gov.au)

**PO Box15456, City East, Qld. 4002**

By:-

National Biodiesel

National Biodiesel Distributors (Australia) Pty Ltd.

[REDACTED]

[REDACTED]

[REDACTED]

Contact Mr. Gary Seaton

Director

[REDACTED]

[REDACTED]

[www.national-group.com.au](http://www.national-group.com.au)

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[biofuels@dews.qld.gov.au](mailto:biofuels@dews.qld.gov.au)

**PO Box15456, City East, Qld. 4002**

Dear Sir/Madam,

Re: Liquid Fuel Supply (Biofuel Mandate) Amendment Bill 2015

**Background.**

National Biodiesel is Australia's leading supplier of premium quality biodiesel. It pioneered the use of virgin soy based biodiesel in Australia when it commenced the distribution of its soy biodiesel product in 2009. As well as supplying 100% soy biodiesel, National Biodiesel has established itself as the leading supplier of premium biodiesel blends with its 5% and 20% biodiesel products.

Nation Biodiesel's role is to provide high grade fuel for clients such as:-

- The existing Australian Land, Sea and Aviation Transportation Sectors which along with the Australian Mining sector currently consume  $1.8 \times 10^{10}$  liters of diesel. and,
- New emerging clients such as the US Navy (which will be required to meet 50% of its fuel needs from green fuel sources.) and will have new naval base arrangements in northern and western Australia

**Liquid Fuel Supply Amendment Bill**

As a member of the Biofuels Association of Australia (BAA), BPA supports the objective of the Bill to require minimum ethanol content in relation to the total volume of motor spirit sold in Queensland. More importantly we believe the bill MUST urgently address the issue of providing a realistic mandated minimum content for biodiesel. In a State such as Queensland, diesel is the main transportation and mining fuel, and also Queensland is a State where the level of unleaded petrol usage is remaining static, subsequently, diesel usage is rising. Taking action to make a portion of both these fuels biofuels will we believe:-

- Leverage Queensland's agricultural base to create value adding options for farmers,
- Improve air quality as a result using oxygenated fuels resulting in more complete combustion,
- Take some important first steps in improving Queensland's fuel security by developing alternative fuels,
- Position Queensland as a global player at the forefront of an emerging advanced biofuels

- industry, and
- Take a leadership position in advocating for clean energy.

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.

## **Comments on the Liquid Fuel Supply (Biofuel Mandate) Amendment Bill 2015**

### **The Policy Environment**

Current Commonwealth policy of a full fuel excise on imported biofuels (38.143 cents) and a rising excise from zero to 12.5 cents on domestic by 2020 makes it imperative to establish the local biofuel industry as quickly as possible. Only a thriving, profitable, domestic industry will be able to provide this level of service to the taxpayer. Establishing this grade of industry in a five year window will require solid, bipartisan support at Federal and State level, much less growing the Industry to a National and International standard of reliability ,productivity and profitability. Consequently any mandate levels cannot simply be fixed, and will need to incorporate a growing percentage to reflect the growth in the excise whilst establishing the Industry

### **The Ethanol Percentage**

#### **Setting a level**

Although National Biodiesel is focused on the securing of support for the production, use, and if possible a mandated utilization level for at least 2% initially for Biodiesel in Queensland, we believe the broader benefits of a Queensland biofuels industry will be encouraged also by an ethanol content mandate for motor spirit. In order to ensure a proper growth rate that allows for a realistic industry base, National Biodiesel is in agreement with the BAA's and RACQ's current position that the level for an ethanol mandate in Queensland be set initially at between 2% and 3% in 2016. However some growth formula such as "rising to 5% by 2020 "must be included to give investor stability because of the additional capital required for growing production and refining facilities. A minimum level of 2% initially for both biodiesel and ethanol represents a figure (60-90 ML per annum) that the current industry has the capacity to supply.

### **Rationale**

As the flow of fuel to the consumer is controlled in the main by the major oil companies, the market cannot be considered as a free market. Major oil companies not being basic to the manufacture of biofuels have no commercial incentive to offer cleaner biofuels to the market. It is this reason, coupled with the benefits to regional economies and the lessening of the negative externalities associated with the burning of fossil fuels that countries all over the globe have resorted to implementing mandates as the central policy for promoting the development of cleaner fuels.

### **Liabile Parties, Exemptions, Penalties**

The Retail sector is the logical portion of the supply chain to reinforce, by penalty if necessary, the Government's commitment to the desired outcome. Consideration must be given however to the retailer's size and capacity, hence a matrix where some smaller retailers (remote local businesses) are fully exempt (set by annual trading volumes), mid range retailers (again by volume) are given a reasonable time frame to prepare before penalties apply, and majors where, after an appropriate implementation program is complete, full penalties apply. The Industry measures all performance indicators based on volume and it is logical that the penalty regime should also have this as a guide.

### **Expert Panel/ Implementation Board**

There resides in Queensland a high level of technical and commercial experience in the production and use of biofuels. Nearly half of Australia's only eight viable biofuel manufacturing facilities are located in Queensland and all of Queensland's major universities have involvement to some degree in biofuel technology. This is in addition to the "hands on" experience of the sugar milling industry. The important function of any Expert Panel/Implementation Board will not be the correct introduction of biofuels if its members are drawn from this base, but more importantly, the inclusion of the retailer and feedstock producer sectors etc. that need representation to address fears that will arise from their sector's concern over perceived disadvantages in changing the status quo.

### **Protecting the Environment**

Agriculture within Queensland is already a highly regulated industry from tree clearing to pesticide and fertilizer use, and Government Departments such as DAAF and EPA already provide a high standard of environmental protection within the industry. Similarly with the petroleum industry. The introduction of slightly higher levels of biofuel activity to these industries does not warrant any extra layer of bureaucracy.

### **Maintaining Consumer Choice/Consumer Protection**

Any product introduced via a mandate will require a concerted consumer education program and some level of cost deferment for those enterprises forced to meet costs of implementation. However, a vigorous well targeted education plan that creates a greater demand for the product and hence higher sales volumes of it is the most efficient and cost effective way to mitigate the complaint that some parts of the existing petroleum product supply chain find "implementation too expensive" with the associated demand for Government assistance. If a product is selling well to the public, participants in the market will make self funded efforts to capture part of the sales.

### **Securing Food Supplies**

Stability in markets is achieved by consistent, long term substantial growth in demand and supply of commodities. The addition of extra off take capacity by an expanding industry allows for a growing of the cake rather than an emphasis of dividing up the existing cake. This mandate will provide for the entrance of new participants, capital and labour to the benefit of Queensland as the market grows.

## **Bio-Manufacturing**

A vast range of technical skills in the feedstock selection, producing, manufacturing and distributing of biofuels has developed, **mostly unnoticed**, within Australia. Sadly all of the attractive scale Industries that can support R&D and Intellectual Property development in the biofuel space are located in Europe, North or South America, hence a brain drain away from Australia's capabilities. The introduction of this mandate will establish the basis for an industry that can rival these foreign centers of activity and support the technical development necessary to make Queensland and Australia a world leader and knowledge exporter in this field.

Gary Seaton

Director

National Biodiesel

National Biodiesel Distribution Pty. Ltd.

Attachment.

## **Attachment: 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: Dalby, Sarina, Narangba, Barnawartha, Largs Bay, Picton, Nowra, Maitland, 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 as is the potential for biofuels to impact positively on reducing GHG emissions. 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.

Given the recent announcements of oil companies to cease producing petroleum in a number of capital cities, supporting biofuel production is one way Australia can ensure that it continues to have some indigenous fuel production capability. Biofuels and in particular the prospect of advanced biofuels from biomass offer a genuine opportunity for scale production into the future and a pathway to a secure supply of lower cost fuel for all Australians.