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7 February 2014

Margaret Sewell & Gary Richards
Energy White Paper Taskforce
Department of Industry
GPO Box 1564
CANBERRA ACT 2601

Sent via email: EWP@industry.gov.au

Dear Margaret & Gary,

Re: Biofuels Association of Australia (BAA) Submission on the Energy White Paper Issues Paper

On behalf of its members, the Biofuels Association of Australia (BAA) appreciates the opportunity to provide comment on the issues presented in the *Energy White Paper Issues 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.

The local industry has benefitted from the assistance provided by the Australian Government via the Ethanol Producers Grant and the Cleaner Fuels Scheme, which provide policy certainty to 2021. Importantly, policy certainty and consistency is a critical factor for business in securing financial backing and investment in new technology development and production facilities. To this end, the BAA and its members look forward to participating in the Government's process to develop a new Energy White Paper and discussing with you, our vision for the industry.

BAA Comments on the Issues Paper

The BAA has reviewed the Issues Paper and identified a number of areas on which we would like to provide comment.

Biofuels Industry Economic Analysis

To further inform the Government's consideration of policy mechanisms relating to the growth of a domestic biofuels industry, the BAA commissioned Deloitte Access Economics to undertake a study on the economic contribution of the Australian Biofuels Industry¹.

¹ Deloitte Access Economics; *Economic contribution of the Australian Biofuels Industry*: 2014 Draft report

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. This analysis excludes accounting for any benefit to consumers for discounted fuels or any attribution of the health benefits associated with the use of biofuels to reduce particulate emissions. Given that the biofuels industry represents just 1% of fuel sales by volume, we believe this demonstrates the significant economic potential that this industry has to contribute to Australia's future.

Policy Recommendations

In addition to industry efforts to increase market share, we are keen to explore policy mechanisms with Government as part of the Energy White Paper process, to grow Australia's renewable liquid fuel industry.

Importantly, the BAA believes that it is critical for the Government to provide a clear signal to the marketplace that Australia is committed to growing the volume of renewable fuel in the Australian fuel mix. We hope to further explore the policy options discussed below in this process and in future discussions. In particular, the BAA urges Government to consider the following policy principles and mechanisms to encourage the growth of the Australian Biofuels Industry:

1. A National Volumetric Renewable Liquid Fuel Target

Proposal: Establishment of a National 2 Billion Litre target for Renewable Transport Fuels by 2025

The private sector and financial community need strong signals that government is committed to growing renewable fuels in Australia. As such, the industry is keen to progress discussion of a national volumetric target for renewable liquid fuels. The 2 Billion litre target for the production of biofuels suggested represents about 5% of the total volume of liquid fuels used for transport in today's terms and is readily achievable with the renewable resources available in Australia. More importantly, achieving this target would generate a significant economic contribution to the Australian economy and many thousands of jobs, net of any grant support provided to the industry.

In 2001, the then Howard Government set a target to reach 350ML of biofuel capacity by 2010. This target was in fact exceeded which demonstrates what can be achieved when governments set aspirational goals that are supported by sound policy. This type of action would send a clear investment signal to Corporate Australia and we believe would revitalize energy manufacture in Australia.

Globally governments are recognizing the need to support growth of renewable fuels with about 60 countries having instituted either a mandate or target to drive the uptake of biofuels in the liquid fuel market. As the debate surrounding the benefits of biofuels has matured, so have the global policy frameworks ensuring that the goals for diversifying their liquid fuel sources are delivered for their economies without unintended consequences.

Globally it is being recognized, that biofuels will need to make up an increasing amount of our future liquid fuel mix. Both the International Energy Agency (IEA) and the World Energy Council (WEC) support the development of a global biofuels market to reduce demand for fossil fuels and lower carbon emissions. The IEA publish an outlook report each year providing forecasts for each element of the energy sector. The IEA are currently forecasting that oil prices will only be kept in check, if policy actions are adopted by government to achieve a lower carbon future.



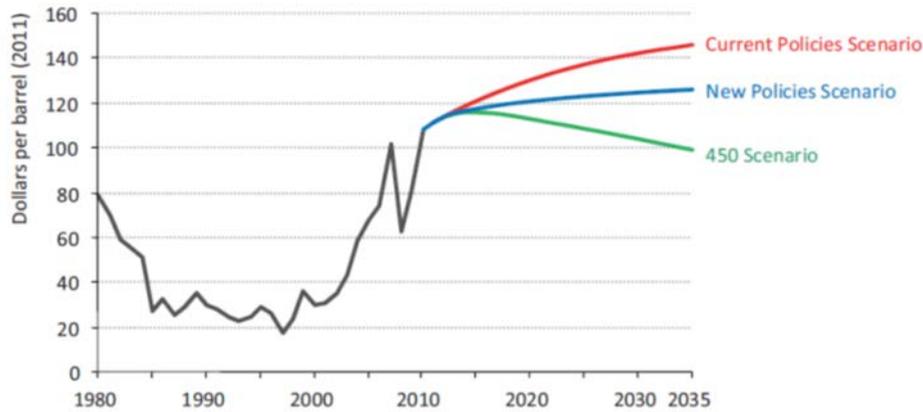


Figure 1: International Energy Agency (2012) Oil Price Forecast

Increasing the use of Biofuels globally will in turn lower the price of oil

IEA 2013

In addition, the IEA forecast what is necessary as a contribution from each sector, including transport fuels, to limit concentrations of greenhouse gases in the atmosphere to around 450 parts per million of CO₂.

		Current Policies		Proposed Policies		450 Scenario	
	2010	2020	2035	2020	2035	2020	2035
Biofuels (mboe/d)	1.3	2.1	3.7	2.4	4.5	2.8	7.6
Road Transport	1.3	2.1	3.6	2.4	4.4	2.8	6.8
Aviation	0	0	0.1	0	0.1	0	0.8

Note: All data is quoted in million barrels of oil equivalence consumed per day

450 Scenario refers to the International Energy Agency scenario to achieve 450ppm atmospheric CO₂ concentrations

Table 1: IEA Forecast demand for Biofuels under various scenarios to 2035

In this scenario, global demand is set to at least treble over the forecast period to in excess of 350 Billion litres of biofuel. Likewise the World Energy Council calls on governments to set policies to support the emerging biofuels industry in an effort to reduce global CO₂ emissions. However, the use of biofuels has only grown significantly in those regions where government support has been provided through local policies and incentives.

In Europe, 29 of the 34 countries have enacted Biofuel mandates and/or targets. The drive in the EU has been threefold.

- Reduce particulates and improve air quality in their major city air-sheds.
- Develop and support regional communities
- Reduce the carbon intensity of their fuels and respond to the demands for action in the fight against climate change.

The EU have recently published their roadmap for biofuels which targets the following objectives

- B7 inclusion in all diesel fuels
- Maximise the uptake of E10 in the compliant EU car fleet
- Establish E20 as the fuel standard for new vehicles produced to allow for the increase of the blending limit by 2025.

Finally, the Asian market is also embracing biofuels. Mandated inclusion rates varying from 2-10% are now in place in China, India, Thailand, Indonesia, Japan, South Korea, Taiwan and Vietnam.

2. Alignment of Policy Mechanisms to Support Growth

Proposal: Continue the current off-road fuel tax rebate as an incentive for mining and construction companies to choose low carbon intensive fuels like biodiesel.

Biodiesel has seen modest growth in demand driven by the mining and construction industries. In particular, the off-road fuel tax rebate provides some incentive for mining companies to switch from diesel to biodiesel blends such as "B20". With the repeal of the carbon tax, the BAA supports the position that the current off-road fuel tax rebate should be left in place and that it should be de-linked from the carbon price. We believe this is a policy option that is strongly aligned with the Government's "Direct Action" approach to climate change.

However, policy mechanisms need to be carefully constructed so that unintended outcomes do not prevail. Imports of biodiesel are currently booming from countries where government support in their domestic economy is leveraged enabling product to be dumped into markets which then attract further government credits, initially intended to support domestic manufacturing growth. Other economies, for example the EU, have moved to limit this type of behavior, by imposing duties on imported biodiesel product namely from Argentina and Indonesia, therefore ensuring taxpayer funds remain within their economy and support the intention of their policy frameworks.

In Australia, our Biodiesel producers are running at less than 50% of installed capacity and in fact exporting product due to their inability to compete against the dumped product. If this scenario continues, Australia will see the perverse outcome whereby foreign product will be directly subsidized by the Australian taxpayer and Australian produced product will not. Let alone the additional fossil fuels that will be consumed in shipping product both ways across the pacific.

Proposal: To alter the Fuel Specifications to conform with the Worldwide Fuel Charter for Sulphur content

Currently the petroleum sold in Australia does not meet the standards set out in Category 3 of the Worldwide Fuel charter² 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 and the increase of imported petroleum products there is also an 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.

The EU and the US have both recently announced initiatives to increase the ethanol blend percentage to E20 and have aligned their fuel standards and emission standards accordingly in the quest for improving air quality and driving regional development. With the reduction in local oil refining capacity and the increase in imported product it would be opportune to explore opportunities to raise the blend limit as many new vehicles being produced today are fully compliant with higher blend percentages. Increasing the blend wall would also have a positive impact on improving our local fuel security.

3. Advocacy regarding the benefits of Renewable Fuels

Proposal: The government establishes a fund to be used to take direct action in educating consumers and making the benefits of Renewable Fuels transparent to the public.

The industry faces a number of challenges in its efforts to penetrate the mainstream fuel market. In the last

² Auto Alliance: Worldwide Fuel Charter (5th Edition): 2013 <http://www.autoalliance.org/auto-issues/fuel-publications>



two years, we have seen a decline in sales of ethanol-blended fuel and in the 2011-12 period, a decline in the number of retail sites selling E10. The largest volume of ethanol-blended fuel (over 80 percent of the ethanol blended fuel market) is sold in NSW, driven by legislation requiring 6 percent of the total volume of petrol sold to be ethanol. Despite this, today only around 3.6 percent of the petrol market in NSW is ethanol.

Consumer demand for the product is heavily influenced by price, and less so by the broader benefits to society. For ethanol, the price at the pump is a critical factor and the decreasing price differential between RULP and E10 (in 2011-12 average prices for RULP were only 1.8 cents per litre higher than for E10 according to the ACCC) and the influence of “shopper docket” have a significant impact on demand.

In Australia, our total biofuel production capacity is set to exceed 700 ML in 2014 consisting of approximately 450 ML of ethanol production capacity and around 215 ML for biodiesel per annum with another 140 ML pa expected should the Darwin facility re-start production in 2014. At present, consumer demand for biofuel is lower than the installed capacity, which is a turn-around from prior years, when it was believed that local supply would be insufficient to meet future demand. This is a concerning situation for the industry, which has invested based on expected future demand and government policy intentions.

Unfortunately biofuel producers have limited opportunity to connect directly with consumers as this interface is controlled by the retail oil networks. Retailers are obviously invested in their brands and with biofuels still being a very small component of their overall offer receives little attention. Opportunities may exist to introduce mandatory labelling of fuels to ensure that consumers are making informed choices as to the carbon intensity of the fuels they are choosing.

The Biofuels Association of Australia (BAA) would like to be able to provide a better service to consumers by being able to provide the following:

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

Unfortunately given the current size of the industry, the BAA lacks the funding to properly support the industry and assist it in reaching its full economic potential. Without Government leadership to indicate its dual intent to have biofuels as part of Australia’s mainstream fuel mix and support to grow Australia’s energy manufacturing sector, it is unlikely that biofuels will increase penetration of the mainstream fuel market or deliver the economic potential as indicated as being possible by the Deloitte Biofuel Industry Economic Study.

4. Support for the Development and Commercialisation of Advanced Biofuel Technologies

Proposal: Establish a taskforce to clarify policy arrangements for Advanced Biofuels and develop a suite of specific incentives to ensure that Australia can develop its extensive natural resource advantages in this industry sector.

The current policy arrangements regarding excise are an important enabler in the development of the domestic biofuels industry. However, the policy only takes into account ethanol, biodiesel and renewable diesel. It is important that incentives to assist the development of future advanced biofuels, including renewable fuels for the aviation industry, do not discriminate between fuel type and technology, whilst maintaining current arrangements for existing industry players.

Currently it is unclear whether Drop-in fuels produced from biomass sources for instance would achieve any excise relief. The BAA would welcome the opportunity to work with government on developing a suite of specific incentives that would drive new investment in the renewable fuel sector and enable Australia to be at the forefront of what is one of the largest global sectors of development in the energy complex.

5. Long-term policy certainty and consistency at both State and Federal levels

Importantly, in considering future policy settings, the BAA believes that the Government must take a strategic approach, thinking beyond electoral cycles and involve setting clear and ambitious goals, which have bipartisan support. Through providing long term policy outlooks that support the development of alternative renewable fuels, there is the potential to unlock over a billion dollars of new project investment in the near to medium term in the sector providing jobs, regional development and cleaner fuels.

The study performed by Deloitte Access Economics demonstrates that the investment made by the government in the biofuels industry has significant returns in terms of both GDP and job creation. Having a long term policy position to continue to support the industry therefore is very much in the interest of supporting growth for the Australian economy.

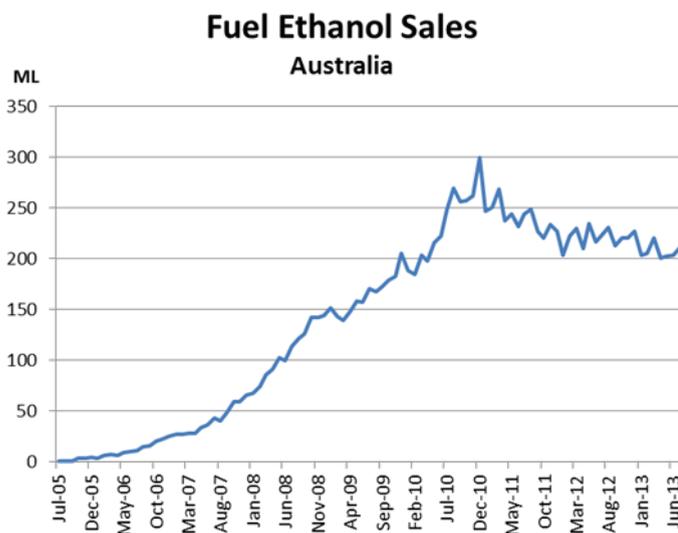


Figure 2: Volume of Ethanol fuel sales in Australia (source: BREE)

As evidenced in Figure 2, Ethanol fuel sales increased steadily from the period of 2005 through 2010. During this time there was clear commitment from the federal government to developing the industry through the establishment of a 350ML target and support through providing excise relief support. Coupled with this action was the establishment of a mandate for biofuel inclusion in NSW in 2006 and the announced intention of Queensland to also implement a mandate from 2010.

As we approached 2010 as an industry, a policy vacuum was created with a lack of clarity on the future of the Ethanol Producers Grant (EPG) and also the faltering of the Queensland government to mandate biofuels. Investors require long term certainty and coupling the uncertainties provided by the energy and agricultural markets with uncertainty in the regulatory framework made new investment near to impossible.

In 2011, the EPG and CFG arrangements were extended to 2021 and provided a narrow window for investment. That window is now closing as we fast approach the 7 year investment horizon to 2021. In 2011/12 combination of the floods in Queensland causing a short term supply interruption and the reduced interest in implementing the Queensland fuel mandate consequently provided the oil majors the opportunity to reduce forecourt supply capacity, which was never restored post flooding.

In summary, in the period prior to 2010 where policy was certain growth followed. As policy has become clouded and less certain investment has stalled and a period of negative growth has ensued.

6. Support for education as to the role biofuels can play in our future fuel mix

Proposal: Establish a combined motor industry working group to recommend minimum standards for local and imported vehicles with respect to compatibility and warranted performance with biofuel blended fuels.

Unfortunately biofuels are still considered new and novel by many consumers and are yet to be accepted as a trusted fuel choice. Whilst there are innumerable studies as to the quality of the biofuels provided and the fact that the stringent Fuel Quality Standards set by government make biofuels a safe choice, the public are yet to be convinced.

The Biofuels Industry is still an emergent industry with less than 1% of the supply and less than 0.1% retail exposure, it is very difficult for the industry to connect directly with its consumers and market the benefits of biofuels. During the industry's formative years, it is important that we have a 'champion' in the Government, to deliver the message regarding the benefits of Biofuels, if significant growth and hence investment is to follow.

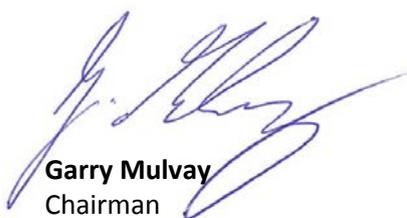
Removing confusion around warranties and vehicle compatibility with biofuel blends, such as E10, E85, B20 and B5 would go a long way to building consumer confidence. Working with the automotive and truck industries will be important in the development of future policy settings to ensure that Australia's goals for the development of a renewable liquid fuel market are aligned with the timely development of fuel standards and introduction of compatible vehicles into the Australian market.

We trust that the BAA's submission provides an understanding of the industry's views in relation to the issues raised in the Energy White Paper Issues Paper and we thank the Department for an opportunity to contribute to the development of Australia's new Energy White Paper. 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,



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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.

