Biofuels Association of Australia

Submission
27 August 2008

Submission by the Biofuels Association of Australia (BAA)
to
Senate Select Committee on Fuel and Energy

The Biofuels Association of Australia (BAA) is the peak body for the biofuels industry in Australia. The BAA represents ethanol and biodiesel producers, feedstock suppliers, independent oil companies, major oil companies and other organizations interested in the Australian biofuels industry.

The Biofuels Association of Australia is grateful for the opportunity to make a submission to the Senate Select Committee on Fuel and Energy. The BAA will confine its submission to the issues arising out of:

1 (d)
the impact of an emissions trading scheme on the fuel and energy industry …

(f)
taxation arrangements on petroleum, diesel and gas products including:
(i) Commonwealth excise

(g).
the role of alternative fuels to petroleum and diesel, including but not limited to: LPG, LNG, CNG, gas to liquids, coal to liquids, electricity and bio-fuels such as, but not limited to, ethanol.

The BAA is available to discuss with the Select Committee its views that:

- Given the right policy environment, biofuels are capable of reducing the carbon emissions of Australian transport.
- Given the right policy environment, biofuels are capable of providing additional flexibility and supply to the Australian fuel market as we approach a peak oil event.
- The implementation of excise tax on biofuels be delayed until 2016.
- The price differentials between biofuels and petrol and diesel anticipated from the Carbon Pollution Reduction Scheme, should be maintained under the mechanism being developed to compensate fuel users for the added cost of carbon.
- Additional research funding be allocated to the development of second generation feedstocks in Australia for ethanol and biodiesel.
- The Biodiesel Section 13 approvals process being developed by the Department of Environment, Water, heritage and the Arts not restrict higher level biodiesel blends from accessing the market.

- Any changes to biodiesel standards not impact negatively on the Fuel Tax Credit available for biodiesel blends.

General Comment

Australian transport fuel markets are entering a period of structural change as the world enters a new paradigm, a world with lower carbon fuels, and peak oil.

However, it is likely that left to its own devices, the fuel market **will not** deliver the required changes in time.

Biofuels such as ethanol and biodiesel show great promise for reducing carbon in fuel and adding significant volumes to help replace diminishing fossil fuels, especially from second generation feedstocks.

However, it takes many years to develop the new supply chains for ethanol and biodiesel, from crops through production facilities to the development of markets. In fact market development for ethanol was interrupted for several years with a severe impact on production volumes:

Summary Table - Ethanol

Year	Production (ML)
2003	51.27
2004	23.63
2005	27.27
2006	60.05
2007	111.95

This set back investment in the ethanol industry in Australia by several years. It is only now that we will see Australia's first green fields ethanol production plant being developed at Dalby (production in November 2008) and expansions at CSR's Sarina plant and Manildra's Nowra plant.

Biodiesel production facilities really only started to be developed in any significant way from around 2005, and apart from significant production at only four plants, in 2008 we see many of the remaining plants producing either at very low levels or not at all due to high feedstock prices and slow market development.

This highlights how difficult it is develop a new fuel industry in Australia and is the basis for recognition that the previous federal Government policy of implementing net taxes on biofuels in 1 July 2011 should be delayed for a further 5 years to 1 July 2016. Moreover, the Federal Government needs to commit significantly more research funding into Australian second generation biofuels feedstocks – more than the very tiny $15 million already announced.

The view that Australia needs to act now if we are to meet lower carbon and peak oil objectives in time is reinforced in the CSIRO Future Fuels Forum Report. The report highlights that the penalty for not moving quickly enough is likely to be $8 per litre fuel prices.

The NRMA Jamison report also came to similar conclusions. In summary the Jamison report recognizes that:

- The transport sector provides one of the keys to reducing Australia's carbon footprint.
- That Australia's oil imports have increased alarmingly over the past few years to the extent that the oil trade deficit is now $10 billion per year.
- It is reasonable that seed funding be provide to the alternative fuel sector, especially as there is substantial support to the fossil fuel industry through various mechanisms.

While the Federal Government has announced its intention to implement a Carbon Pollution Reduction Scheme, its later announcements of delaying the cost of carbon impacts on petrol and diesel will push out the time frame for when biofuels can expect the price differential the industry has been expecting to drive its future market development. This will occur at the same time that net taxes will be imposed on biofuels, so there will be a strong negative impact on the biofuels sector at a time when Australia should be encouraging structural change in the fuel industry.

Food versus Fuel

The BAA view is that food versus fuel is not an issue currently for biofuels production in Australia. This view is shared by the CSIRO in its publication "Biofuels in Australia – issues and prospects" as well as in its sister publication "Biofuel Co-Products as Livestock Feed."

The reason for this is that Australian producers use waste starch and molasses for ethanol production, and tallow and used cooking oil for biodiesel production.

The new ethanol production facility at Dalby will be using sorghum which is a feed grain rather than for direct use in the food industry.

On the international perspective the BAA believes that the impact of biofuels on food prices has been exaggerated. There are other drivers in the market including recent droughts affecting grain production, increased demand from India and China, particularly for higher protein foods such as beef (which itself requires 7 kg grain to produce 1 kg of beef), and high oil prices which underpins higher fertilizer costs and higher transport costs for moving the food items. In fact the recently release UK Gallagher report states that only 1% of the world's cropping land supports crops for biofuels.

Detailed Submission

1 (d) the impact of an emissions trading scheme on the fuel and energy industry …

The objective of the Carbon Pollution Reduction Scheme is to meet Australia's emissions reduction targets in the most flexible and cost-effective way; to support an effective global response to climate change; and to provide for transitional assistance or the most affected households and firms.

The BAA sees the reduction of greenhouse emissions from transport fuels as a very important part of the Government's strategy to meet this objective because:

- Transport fuels are responsible for 14% of Australia's greenhouse emissions.
- The Australian transport sector is the fastest growing greenhouse emission sector.
- There are few alternative fuels that can be used in the existing vehicle fleet and the existing distribution infrastructure.
- There are few alternative fuels that can reduce greenhouse emissions and provide significant volumes.
- Biofuels can be used in existing vehicles and existing distribution) infrastructure (some investment is required in infrastructure but very minor in comparison with gaseous fuels).
- Biofuels can provide significant volumes, particularly from second generation feedstocks.

Moreover, the Government's intention to compensate some sectors of the economy for the higher cost of petrol and diesel due to the Carbon Pollution Reduction Scheme, will delay the ability of the transport sector to contribute to the carbon reduction objective, thereby reducing the efficiency and effectiveness of the Scheme.

Comments on the Broad Structure of the Proposed Carbon Pollution Scheme

The BAA finds no reason to doubt that a Cap and Trade approach is an appropriate mechanism to ensure that there are economic drivers in the Australian economy to encourage the nation to move towards a more carbon constrained future.

Likewise it appears appropriate that the current excise point of liability also be the acquittal point for assessing the volumes of biofuels supplied to the Australian fuels market. This is on the basis that it makes sense to use a system that is already in place (the excise system) and that it makes sense to have the acquittal point as far up the supply chain as possible ie essentially at the wholesale supply point leading to a lower cost and simpler system.

The biofuels industry believes in the principle of maximum coverage of the Scheme because less than maximum coverage increases the cost of carbon abatement for the sectors that are still in the scheme. In addition, if the sectors left out compete with lower carbon fuels such as biofuels, then the anticipated pricing signals to encourage these lower carbon fuels will not be there and this will delay significantly investment in biofuels and hence delay the reduction of greenhouse emissions from the Australian transport fleet.

What is important is that a differential price based on embedded carbon level differences needs to be maintained between petrol and ethanol blends, and between diesel and biodiesel blends. This brings into the market the current externality of carbon pollution due to higher carbon fuels such as petrol and diesel.

Coverage

The BAA believes that all transport fuel should be covered by the scheme including fuels such as Liquefied Petroleum Gas (LPG), Liquefied Natural Gas (LNG), Compressed Natural gas (CNG), Coal To Liquids and Gas To Liquids. It is important to include fuels that have not yet become significant in the transport fuel market to ensure that investments are not encouraged in fuels that will not reduce Australia's transport fuel greenhouse emissions.

"For heavy vehicle road users, fuel taxes will be cut on a cent for cent basis to offset the initial price impact on fuel associated with the impact of the Carbon Pollution Reduction Scheme. The Government will review this measure after one year."

The heavy vehicle on road sector is a key developing market for biodiesel blends. If the action proposed above takes place it will reduce the momentum which is building in the industry to develop this market because the anticipated price differential will not be available for at least one year from 2010. It is also likely that this effect will be exacerbated by the implementation of net tax on biodiesel from 1 July 2011 if the timing of the two measures coincide.

The Government could reduce the emissions of the heavy vehicle transport sector and not increase prices for transport by ensuring that the anticipated price differential is put in place by reducing the price for biodiesel by the equivalent price increase that was to have taken place for diesel. This would not be a significant cost for revenue because it is only for one year. The Government could also delay the introduction of net tax on biodiesel for 5 years to 2016.

"The Government will cut fuel taxes on a cent for cent basis to offset the initial price impact on fuel associated with the introduction of the Carbon Pollution Reduction Scheme. The Government will periodically assess the adequacy of this measure for three years and adjust the offset accordingly. At the end of the three year period the Government will review this adjustment mechanism."

This will have a negative impact mostly on ethanol blends up at least until 2013 because a reduction of excise on a cent for cent basis for petrol will ensure that ethanol does not benefit from the price differential that was expected from putting a value on the amount of carbon embedded in petrol.

It is unclear whether this measure would also apply to diesel for the general public, in which case there would also be a negative impact on biodiesel blends being offered to the general public.

This situation will then be exacerbated by the Government's current policy of implementing a net excise of 2.5 cents per litre (cpl) for ethanol from 1 July 2011

phasing in to reach a maximum of 12.5 cpl in 2015, and 3.8 cpl for biodiesel from 1 July 2011, phasing in to reach a maximum of 19.1 cpl in 2015.

These negative impacts would be further magnified for the biofuels industry because it is a young industry which is:

- Still developing its infrastructure
- Still developing its markets
- Still developing its supply chains, and
- Still trying to attract investment.

"To assist rural and regional areas, the Government will provide an equivalent rebate to businesses in the agricultural and fishing industries for three years. This is necessary as the excise system effectively does not apply to this sector."

If the Government were to reduce the price of biodiesel blends by the same amount that the emissions trading scheme would have increased the price of diesel by, then greenhouse emissions from the farming sector could be reduced ahead of the inclusion of agriculture in the trading scheme in 2015.

Furthermore, if this is not done then biodiesel blends will find it very difficult to penetrate the agriculture market until after 2015 and there will be further negative impacts on the industry from the implementation of net tax from 1 July 2011.

A further negative is that there will be the additional hidden cost of regulatory complexity because there is already a Fuel Tax Credit Scheme that delivers tax rebates for the agriculture, mining and heavy vehicle on road transport, and a cent for cent compensation scheme will be required to differentiate between mining, transport and agriculture at least from year 2. In addition the scheme will have to differentiate between biodiesel blends and diesel.

Price Mechanism

The discussion in Box 2.2 concerning the merits of including transport in the emissions trading scheme appear to be based on the premise that higher fuels prices will:

- Encourage consumers to purchase more fuel efficient vehicles
- Encourage consumers to travel less in their vehicles
- Encourage consumers to use public transport more
- Encourage consumers to live closer to required facilities.

But over a relatively long time frame – several years to decades.

The BAA would contend that an important mechanism left out of this discussion is that price differentials between fuels that can be used in the same vehicle (E10 in petrol vehicles, and B5 or B20 in diesel vehicles) would provide significant greenhouse emission reduction much earlier than the mechanisms outlined above and with much less cost.

Imports of Biofuels

There is an incorrect statement at the top of page 118 that "Biofuel is not imported". Biodiesel and fuel ethanol have been imported into Australia recently.

This is an important point because it demonstrates that the Carbon Pollution Reduction Scheme will have to deal with imports of unknown origin and hence the sustainability issue of the feedstocks used, sooner rather than later. We cannot afford to wait and sort this issue out later because it will impact on the viability of the domestic ethanol and biodiesel industry.

There will also be a competition issue of a local producer of ethanol or biodiesel that exceeds the 25 kt limit for accounting for its own greenhouse emissions, having to account for its emissions awhile an importer would not. This will have a negative impact on the viability of domestic producers that exceed the 25 kt threshold.

Zero Rating of Biofuels

The BAA agrees with the preferred position stated at 2.17, that:

"Scheme obligations would not apply to emissions from combustion of biofuels and biomass for energy; they would receive a 'zero rating'."

This is in line with international greenhouse accounting rules.

Solution

The BAA believes that the solution to these issues is for the Australian Government to:

- Delay the introduction of net tax on ethanol and biodiesel for 5 years until 1 July 2016; and
- Ensure that the anticipated price differential between biofuels and conventional fuels is maintained if conventional fuels are to be compensated for the impact of an additional cost from the Carbon Pollution Reduction Scheme.

1 (f) taxation arrangements on petroleum, diesel and gas products including:
(i) Commonwealth excise

Ethanol

The current excise arrangements deliver an incentive for ethanol blends to be used in Australia. However, it is likely that the Federal Government will implement net taxes on ethanol from 1 July 2011. If the Carbon Pollution Reduction Scheme (CPRS) does not deliver an equivalent benefit to the excise incentive, then it is possible that the ethanol industry might contract from 1 July 2011 until the price of carbon is high enough to compensate.

Biodiesel

The current Fuel Tax Credit for biodiesel blends that meet the diesel standard may be under threat from potential changes to the legislation arising out of:

- The CPRS compensation mechanism for diesel.
- The limiting of biodiesel in diesel to 5% through the changes to fuel standards by the Department of Environment, Water, Heritage and the Arts.
- The creation of a new biodiesel blend standard.

1 (g) the role of alternative fuels to petroleum and diesel, including but not limited to: LPG, LNG, CNG, gas to liquids, coal to liquids, electricity and bio-fuels such as, but not limited to, ethanol.

The two key roles for ethanol and biodiesel will be to:

- Reduce carbon emissions significantly from the Australian transport sector
    - Biofuels could reduce greenhouse emissions from the Australian transport sector by a minimum of 7.1 million tones annually based on E10 and B20 and first generation feedstocks
    - There is potential to reduce emissions even further based on the use of E85 and B100 using new feedstocks such as lignocellulosics for ethanol and algae and/or Pongamia pinnata for biodiesel; and
- Replace large volumes of fossil fuels as we enter a period where demand for fuels is likely to exceed the supply of easily accessible fossil fuels.

The CSIRO has stated in its report "Biofuels in Australia – issues and prospects" that there is potential for lignocellulosic feedstocks to supply a significant part of the petrol market (ie greater than 20%).

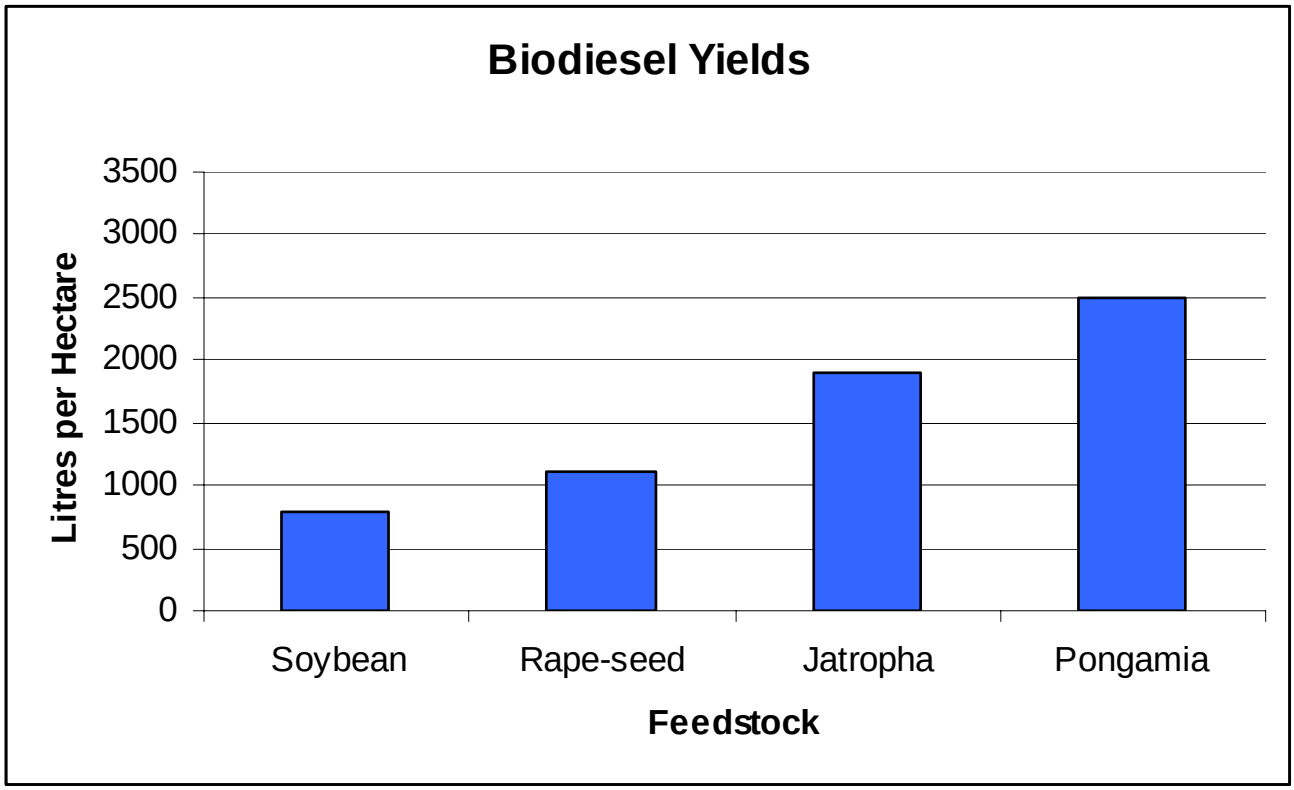
This would easily encompass a market for E85 (85% ethanol). Indeed this is a market objective that GM Holden believe Australia should be seeking to meet. GM Holden are working towards changing its fleet over to being fully E85 compliant over the next few years. An E85 compliant vehicle would reduce greenhouse emissions by 30-50% in comparison with an E10 vehicle of 3.7 to 6%.

Biodiesel blends would likewise also have a large potential in Australia based on second generation feedstocks such as Pongamia pinnata, and algae. In its recent report, the CSIRO Future Fuels Forum has indicated a potential for algae based biodiesel to meet 30% of the transport fuel market.

Pongamia pinnata is also a likely new feedstock because:

- It is a tree that already grows in Australia
- It is a legume and therefore will not require as much fertilizer as other plants
- It is deep rooted and salt tolerant so that it can be grown on marginal land
- It is comparatively high yielding in comparison to many other crops (a minimum of 2,500 litres per hectare, and potentially as high as 5,000 litres of oil per hectare compared with canola at 1200 litres per hectare)
- It produces oil with a relatively low cloud point compared to other biodiesel feedstocks – important for colder areas in Australia.

Several trials of Pongamia pinnata are underway in Queensland and Western Australia.



Source: Peter Gresshoff, ARC Centre of Excellence for Integrative Legume Research.

Concluding Statement

There is wide spread agreement around the world that we need to move towards a lower carbon fuel future, and a future where a greater mix of fuel is available to improve security of supply as we move towards a time of peak oil when demand for easily accessible fossil fuel will exceed supply.

The Biofuels Association of Australia believes that the Australian Government needs to recognize these facts and the need for structural change in Australia's fuel industry. Structural change requires strong policies from Government to bring about that change because inertia of the current fuel system will ensure that the necessary changes will not happen fast enough for our society needs.

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Appendix A

Senate Select Committee on Fuel and Energy

Terms of Reference

1. That a select committee, to be known as the Select Committee on Fuel and Energy, be established to inquire into and report by **21 October 2009** on:
    a. the impact of higher petroleum, diesel and gas prices on:
        i. families,
        ii. small business,
        iii. rural and regional Australia,
        iv. grocery prices, and
        v. key industries, including but not limited to tourism and transport;
    b. the role and activities of the Petrol Commissioner, including whether the Petrol Commissioner reduces the price of petroleum;
    c. the operation of the domestic petroleum, diesel and gas markets, including the fostering of maximum competition and provision of consumer information;
    d. the impact of an emissions trading scheme on the fuel and energy industry, including but not limited to:
        i. prices,
        ii. employment in the fuel and energy industries, and any related adverse impacts on regional centres reliant on these industries,
        iii. domestic energy supply, and
        iv. future investment in fuel and energy infrastructure;
    e. the existing set of state government regulatory powers as they relate to petroleum, diesel and gas products;
    f. taxation arrangements on petroleum, diesel and gas products including:
        i. Commonwealth excise,
        ii. the goods and services tax, and
        iii. new state and federal taxes;
    g. the role of alternative fuels to petroleum and diesel, including but not limited to: LPG, LNG, CNG, gas to liquids, coal to liquids, electricity and bio-fuels such as, but not limited to, ethanol;
    h. the domestic oil/gas exploration and refinement industry, with particular reference to:
        i. the impact of Commonwealth, state and local government regulations on this industry,
        ii. increasing domestic oil/gas exploration and refinement activities, with a view to reducing Australia's reliance on imported oil, and
        iii. other tax incentives; and
    i. the impact of higher petroleum, diesel and gas prices on public transport systems, including the adequacy of public transport infrastructure and record of public transport investment by state governments.