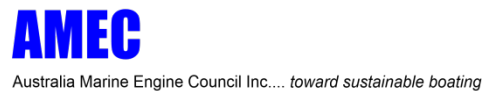


# Response to the Qld Biofuels Mandate Discussion Paper

June 2015

By the 'Alliance Against Ethanol Mandates'



## Executive Summary

The 'Alliance Against Ethanol Mandates' appreciates the opportunity to respond to the Qld Government Biofuels Mandate Discussion Paper.

The alliance comprises a number of disparate organisations which oppose Government mandates of ethanol content in fuel due to concerns that the policy is a blunt, interventionist and distortionary instrument that creates a number of unintended and negative consequences. The organisations involved in the alliance represent the marine industry, stock feed manufacturers, dairy, cattle feedlot, pork, chicken and egg industries (at both federal and state levels).

The list of reasons why the proposed mandate is poor Government policy can be briefly summarized as follows;

- The arguments in favour of mandates are few and contentious at best;
- The arguments in opposition to mandates are large in number and have been backed up by numerous Government and other independent reports. Such arguments include that fact that mandates:
  - Lead to increased grain and molasses prices particularly during low production periods given it imposes an inflexible demand for grain and molasses which is disconnected to supply;
  - Lead to increased food prices for consumers given grain is on average the highest input cost in the production of beef, dairy, chicken, pork and eggs;
  - Force consumers with E10 incompatible engines (i.e. cars, boats, motorcycles, ATVs, lawn and garden equipment) to purchase more expensive premium unleaded petrol (as regular unleaded becomes less available);
  - Force consumers with E10 compatible engines to pay more for their fuel than regular unleaded petrol given the bowser discount for E10 has historically never offset its inferior fuel economy;
  - Assist the sugar cane and grain industries to the detriment of the more numerous producers in the beef, dairy, chicken, egg and pork industries. In particular, mandates impose an effective tax on otherwise competitive agriculture industries (ie a negative externality) for the benefit of the ethanol industry which is both an uncompetitive and unviable without such support and assistance;
  - Lead to a misallocation of resources towards only two ethanol producers in the state who have demonstrated over time to be unviable without such assistance;
  - Consumers don't want the product as demonstrated by the declining demand for E10 over time. Accordingly, a mandate which effectively forces fuel retailers to blend Regular Unleaded Petrol (RUP) with E10 when consumers don't want the product makes no policy or economic sense;
  - Imposes a \$380mill upfront cost burden on fuel retailers to comply. This increase in cost can only be recouped by increasing fuel prices by up to 10c/ litre.
  - Stymie the investment and commercialisation of superior advanced and second generation ethanol production technologies as there is no preferential treatment provided;
  - As with all 'infant industry' type assistance, mandates create ethanol producer complacency, foster inefficiency (rather than increased competitiveness), reliance on Government support and further 'rent seeking' behaviour into the future;
  - Mandates are inconsistent with Australia's World Trade Organisation stance in support for deregulation and reduced Government protection. Accordingly they jeopardize our efforts to seek positive trade liberalization outcomes in trade negotiations.

Notably, the ethanol industry has received nearly \$1 billion in Government assistance alone since 1980. Numerous Government reports have concluded that all Government support policies (including the NSW mandate) since then have been an abject failure with the costs outweighing the small and declining benefits<sup>123</sup>. This is demonstrated by the fact that:

<sup>1</sup> Department of Primary Industries and Energy, 'Portfolio Evaluation for the Ethanol Bounty Scheme', August 1996

<sup>2</sup> BREE, *An assessment of key costs and benefits associated with the Ethanol Production Grants program*, February 2014

<sup>3</sup> <http://www.smh.com.au/nsw/ethanol-benefits-thrown-into-doubt-20120514-1yn4g.html#ixzz2t4F2gntP>

1. Despite large amounts of assistance and protection and 35 years of policy certainty, there are only three ethanol producers in Australia. Notably, despite the NSW mandate being implemented in 2007, no new biofuel plants have come on line in the state since;
2. Ethanol comprises only 1 per cent of Australia's total road transport fuel mix;
3. There is decreasing not increasing consumer demand for the product (despite numerous state and Federal Government programs to 'educate' consumers and the mandate in NSW);
4. The discount for ethanol relative to Regular Unleaded Petrol (RUP) has been reducing over time, despite the significant subsidies provided to the ethanol sector, much of it designed to specifically increase this discount. Accordingly, the inferior fuel economy of E10 is only being exacerbated to consumers detriment whilst the ethanol sector has pocketed such subsidies;
5. The taxpayer cost for such policies have been large whilst the benefits have been small and declining over time.

Moreover, whilst the pro ethanol lobby argues that Queensland should follow the lead provided by 64 other countries that have mandates in place, independent reports that have assessed these policies in totum have concluded that 'governments should cease the implementation and expansion of biofuels mandates and forgo the creation of new mandates'<sup>4</sup>.

Importantly, the Alliance is opposed to an ethanol mandate, even at a 2% level. It is disingenuous to state that at such levels there will be minimal impacts because the extent of such impacts will depend on other factors such as the severity of future droughts. As it is impossible to foresee such impacts, it is best to not implement such a policy from the outset. The Alliance also believes that any tacit approval of a 2% mandate is tantamount to supporting a larger mandate into the future, an outcome that has occurred in NSW (though without success).

Moreover, whilst it is understood that the Queensland Government intends to introduce a clause in the mandate legislation which enables the mandate to be suspended should a natural disaster occur, this will invariably will only occur after the impact on grain and molasses prices is felt. As with all Government intervention, legislation is a blunt instrument that lacks the nuances, timeliness and effectiveness of the normal market mechanism.

In summary, the Alliance believes that:

- Increased Government assistance via a mandate for an industry that already receives more Government assistance per litre of biofuels produced than international counterparts is not the answer. Given that Government support and assistance policies have been in place for 35 years, a better solution would be to phase out such assistance and protection over time (as is occurring in the US and by the Federal Government)<sup>5</sup>;
- No industry should have a Government imposed demand for its product, particularly when consumers don't want it, mandates increase food and fuel prices and the policy costs will likely outweigh any purported benefit;
- Competitive industries should not be forced to incur higher costs on behalf of an ethanol sector which is both uneconomic and uncompetitive (and likely to remain so whilst ever supported by Government);
- The Qld ethanol mandate will provide significant benefits to only two ethanol producers in the state yet will negatively impact upon millions of food and fuel purchasing consumers, livestock producers and tax payers.

Given these issues, the Alliance has no reason to believe that the outcomes from the proposed Queensland mandate will be inconsistent with other past failed ethanol policies, even at low percentage levels. Accordingly, the Alliance believes that the Qld Government should not proceed with the mandate as proposed.

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<sup>4</sup> GDEI (2015), *Mandating Food Insecurity: The Global Impacts of Rising Biofuel Mandates and Targets*, sourced from the internet, <http://ase.tufts.edu/gdae/Pubs/wp/15-01WiseMandates.pdf>

<sup>5</sup> International Institute of Sustainable Development – 'Biofuels – at what cost?' 2008

The discussion paper requests stakeholder responses to particular questions to assist the implementation of an ethanol mandate. The Alliance however believes that the following questions need to be answered by Government beforehand:

- Given that consumer demand for ethanol in NSW has actually declined by 30% over the last 5 years (despite its mandate and numerous consumer education campaigns), why does the Queensland Government think that its mandate will be any different?
- Given that there is still only one ethanol producer in NSW (despite its mandate being introduced in 2007 and numerous plants being proposed since), why does the Queensland Government think that a mandate will improve regional development in the state?
- With nearly \$1 billion worth of Government assistance already provided to the ethanol sector, how much more assistance and protection is required for the sector to be considered 'sustainable'?
- Given Government assistance and protection has been provided to the ethanol sector over the last 35 years, how much longer is considered necessary before the sector has 'policy certainty' and more importantly is forced to stand on its own two feet?
- How long should internationally competitive agricultural industries have to cope with higher Government imposed costs to support an uneconomic and uncompetitive ethanol sector?
- Why isn't a regulatory impact statement involving a thorough quantitative cost benefit analysis being undertaken in relation to the introduction of ethanol mandate legislation (given numerous Government reports have concluded that the costs of mandates outweigh any benefits)?

## Introduction

The Alliance would firstly comment that the discussion paper and consultation process should have been conducted before any Government decision regarding an ethanol mandate was undertaken.

Moreover, given numerous Government reports have concluded that the costs outweighed any benefit of this policy, the process should have at the very minimum involved an upfront quantitative cost benefit analysis (via a Regulatory Impact Statement) as part of the Parliamentary process. This is a standard Regulatory Impact Statement process. The Alliance understands that this is not even proposed and accordingly questions the motives and rigor of Queensland Government decision making.

Before responding to the discussion paper, the Alliance would also like to outline its disappointment and consternation regarding the ethanol mandate consultation process:

- The ALP provided no prior notification to relevant stakeholders regarding the impending introduction of a motion in support of an ethanol mandate in Parliament on the 6<sup>th</sup> May. Accordingly, no opportunity was provided to those opposed to ethanol mandates to voice their concerns to key ALP members;
- The ALP since its election has made no attempt to consult and meet with anti ethanol mandate representative organisations either before or after the motion was carried;
- The Ministers office moreover showed scant regard and arguably contempt to Alliance members who sought to meet with him. One Alliance member for example sent an email requesting a meeting with the Ministers office in late April and made numerous follow up phone calls with relevant Ministerial staff in the days and weeks that followed. None of the phone calls or original email was responded to. A meeting was finally secured for late June. When the Alliance member arrived at the Ministers office for the meeting, he did not even attend with an advisor (one week into his role) seconded to speak on his behalf. No courtesy call was provided to explain his absence beforehand, despite the fact that the Alliance member had to travel interstate to participate;
- The formal public consultation process undertaken was both flawed and tokenistic. It was undertaken after, not before, the Government had decided to pursue the policy, it involved only one meeting in an area which had industries opposed to the policy (Dalby), it provided only two days notice to this meeting (thereby preventing the attendance of a large number of people who would have otherwise participated), it involved seven out of nine meetings in pro mandate cane growing areas (the majority of which are located in Katter Australian Party electorates - thereby further reinforcing concerns that the policy was pursued for political reasons only), it did not include any meetings in a key grass fed cattle

production (a primary stakeholder); and it involved only presenters who discussed the positives but not negatives associated with the policy.

The argued premise for the introduction of a mandate in Queensland has been regional development, environment and fuel security. Before directly responding to each question posed in the discussion paper, it is appropriate that these arguments be explored further to highlight why they are flawed and without foundation.

## What are the arguments in support of ethanol mandates?

### 1. The regional development argument

The regional development argument is flawed because the jobs created by a Government assisted ethanol industry are cost prohibitive and are more than offset by job losses in other more viable rural industries that compete with it for grain and molasses.

The Bureau of Resources and Energy Economics has concluded that jobs created by a Government assisted biofuel industry were difficult to justify (160-200 direct jobs at a cost of around \$545k to \$680k per job) and would be offset by job losses in other more viable rural industries that compete with the ethanol sector for grain such as dairy, beef, poultry and pork. The high cost of job creation means that it would be cheaper to pay each worker average weekly earnings to do nothing than to subsidise them to produce ethanol. In fact the report stated that for every dollar of tax payer investment, the regional benefit provided was valued at only \$0.30. This is hardly a good return for tax payer investment or a prudent investment of limited resources.

In a separate study, ABARES estimated that while 648 direct and indirect jobs would be generated by meeting Australia's current biofuel target of 350 megalitres, the annual cost of maintaining each of these jobs was \$321,000 per year<sup>6</sup>.

The discussion paper notes that there are three proposed ethanol plants in various stages of development in the state. It is noteworthy to point out that when the Commonwealth Government's Ethanol Production Grants Program was introduced in 2002-03, it was suggested that up to a further 15 domestic ethanol plants might be established across Australia. Only one has subsequently eventuated. Given declining demand for ethanol, it is unlikely that more plants will be constructed. This conclusion is reinforced by the recent APAC report which cautions that into the future:

*...unless there is a material change in the fuel ethanol market place, history shows that the likelihood of there being a need for additional ethanol capacity beyond the existing capacity is slim. No new greenfield ethanol plant has been constructed in Australia since 2009 when the Dalby plant was commissioned<sup>7</sup>;*

Notably, whilst biofuels was once seen as a major potential growth industry, public and private investors now see the industry as a risky place to sink venture capital. This is because consumer demand is declining (not increasing) whilst history has demonstrated that the problems and unintended consequences associated with ethanol outweigh the claimed benefits.

The Minister has touted the potential regional development benefits of a mandate in citing a Deloitte report in several media statements recently. Notably however, the report does not focus on the cost benefits of a mandate, merely the potential benefits should all future proposed bio-refinery projects proceed, a large assumption given only one out of fifteen projects since 2002 have eventuated. Importantly the report recommends that subsidies should not be provided to the sector as this leads to a misallocation of resources and scarce public funds being captured by owners of subsidised businesses.

<sup>6</sup> Australian Government, *Report of the Biofuels Taskforce to the Prime Minister*, op. cit., p. 117.

<sup>7</sup> AC biofuel consultants, *Australian Biofuels 2013-14* (October 2014)

Given that there are only two ethanol producers in the state with further ethanol development seen as extremely unlikely, the jobs created by reintroducing the mandate are effectively zero. However, the mandate may negatively impact upon jobs and investment in the beef, dairy, chicken, egg and pork industries.

## 2. The fuel security argument

This argument follows the proposition that the ethanol industry should be encouraged via a mandate because it will allow domestically produced ethanol to reduce our dependence on petroleum imports and vulnerability to external supply disruptions.

However, whilst Australia's resources of crude oil are considered to be low, alternative fuels generally and fuel ethanol in particular contribute little to reducing reliance on petroleum products. This is because currently ethanol in Qld can only be commercially produced from biomass feedstock's (e.g. molasses and sorghum) and these are affected by our significant climatic variability. Accordingly the fuel produced is similarly vulnerable to such variability.

In addition, Australia's crop production is also too small to have any significant impact on our fuel needs without starting to impact upon food production. A number of Australian reports conclude that the production of ethanol from 1<sup>st</sup> generation biomass feedstock will at best only replace 2-5% of Australia's transport fuel demand<sup>89</sup>. Currently, ethanol comprises only 1 per cent of the total road transport fuel market in Australia so ethanol is hardly likely in future to have a material impact upon fuel security. The 2014 BREE report even concluded that if anything, ethanol made a negative contribution. Specifically, it found that the concentration of production in the hands of three companies – Manildra, United Petroleum and Wilmar BioEthanol (Australia) – and their distribution networks, potentially weakened our energy security by making the liquid fuel supply chain more vulnerable to disruption<sup>10</sup>.

The Energy White Paper 2012 noted that there were no tangible energy security benefits provided by the ethanol industry given the proven and reliable supply chains provided by the international petroleum market. In fact, it noted that a shift to domestically produced alternative fuels could actually increase supply risks (i.e. reduce energy security) where this is based on a small number of producers with poor supply resilience. This was borne out by the industry's inability to supply demand during the 2012 Queensland floods due to loss of crops and transport difficulties.

The world's largest ethanol producer (the US) has identical issues in that even if 100% of its corn crop was diverted to ethanol production, only 7% of its fuel needs would be met<sup>11</sup>. In addition, the consumer demand for cars utilising diesel and premium unleaded over flexi fuelled cars (which can use ethanol) has been considerably higher in recent years further indicating that ethanol will not play a great role in Australia's future fuel mix. Australian petroleum statistics confirm that over the last four years national demand for diesel and premium unleaded has increased by 15% and 10% respectively whilst demand for ethanol has declined by 23%. This trend has led Holden to drop its E85 Commodore from its range. NSW Service stations have similarly not met the State's 6% mandate of ethanol content in regular unleaded petrol since it was introduced in 2011 due to a lack of consumer demand (currently sales comprise around 3%).

Currently Australia's ethanol industry is unable to meet the supply requirements of the 6% NSW mandate (let alone the proposed 10% mandate) whilst the proposed 5% Queensland mandate was suspended in October

<sup>8</sup> Australian Academy for Technological Science and Engineering (2008), *Biofuels for Transport - A roadmap for Development in Australia*, Sourced from the internet 17/7/12, page 13 <http://www.thebioenergysite.com/articles/contents/ATSE%20Biofuels%20Report.pdf>

<sup>9</sup> CSIRO report (2007), *Biofuels in Australia – Issues and prospects*, page 3.

<sup>10</sup> BREE, *An assessment of key costs and benefits associated with the Ethanol Production Grants program*, February 2014

<sup>11</sup> David Pimentel (2007), *Biofuels – energy and environmental issues*, Cornell University.

2010 as it was felt that ethanol would have to be imported to meet its mandate needs. Obviously the requirement to import ethanol would only exacerbate fuel security concerns.

Perhaps most instructional in this debate is that fuel security is considered by many to not be an issue in Australia. The National Energy Security Assessment has for instance concluded that our fuel security position is 'high' to 2016 and 'moderate' to 2035<sup>12</sup>. Moreover, the Australian Institute of Petroleum in its recent submission to the Senate inquiry into Australia's transport energy resilience and sustainability, concluded that:

*The National Energy Security Assessment (NESA) and other reviews have found current levels of commercial stockholdings and their management by industry to be fundamentally sound. According to AIP, such reviews have upheld the view that Australia has adequate commercial stocks in the supply chain for supply security and that this situation will continue into the future with recent and planned increases in overall storage capacity in key locations and demand centres<sup>13</sup>.*

Moreover, the Department of Industry and Science in the same inquiry concluded that:

*The Australian liquid fuel market is well served by current commercial market arrangements and international supply chains, and existing national liquid fuel emergency management arrangements. This is supported by observed experience over the past two decades of the performance of oil markets in the face of specific disruptions. A report commissioned by the department found that there is no evidence to suggest crude oil and refined product markets would not swiftly respond to unexpected interruptions to supply<sup>14</sup>.*

### 3. The environment argument

The Productivity Commission has authoritatively dismissed the environmental benefits of biofuels in its extensive 2011 report<sup>15</sup>. It concluded that whilst the Dalby biorefinery would achieve a life cycle benefit over petrol of 43% and the Sarina plant 53%, the tax payer cost of such abatement was between \$394-511 for every tonne of CO<sub>2</sub>-e reduced. The report states that the \$144 million provided to the Australian biofuels industry in 2010 was among the highest of the study countries on a per litre and percentage of GDP basis yet contributed to only a 0.6% reduction in emissions.

Notably, the inflated life cycle emission claims from the biofuel lobby are often based on US state of the art ligno cellulosic plants, have failed to take into account the greenhouse gas emissions from fertilizer use in crop production or the carbon emitted from grasslands which are converted to biofuels<sup>16</sup>. Moreover, they fail to take into account the increased amount of fuel required to travel the same number of kilometers given ethanol's inferior fuel economy. Importantly, the environmental benefits (including life cycle emissions) from first generation ethanol production technology (ie food crops) are significantly less than second generation (ie using crop waste, saw dust, switch grass etc) and advanced ethanol technology (ie municipal waste, cellulose, lignin). These superior technologies also mitigate 'food versus fuel' arguments. This is particularly relevant in Qld given that 100% of Qld's ethanol production is sourced from inferior first generation technology.

<sup>12</sup> Department of Resources Energy & Tourism (2011), *Liquid Fuels Vulnerability Assessment*, <http://www.ret.gov.au/energy/Documents/Energy-Security/nesa/Liquid-Fuels-Vulnerability-Assessment-Report-2011.pdf>

<sup>13</sup> AIP (June 2015) *Submission in response to the Senate inquiry into Australia's transport energy resilience and sustainability*, [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Rural\\_and\\_Regional\\_Affairs\\_and\\_Transport/Transport\\_energy\\_resilience/Submissions](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/Transport_energy_resilience/Submissions)

<sup>14</sup> Dept of I&S (June 2015) *Submission in response to the Senate inquiry into Australia's transport energy resilience and sustainability*, [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Rural\\_and\\_Regional\\_Affairs\\_and\\_Transport/Transport\\_energy\\_resilience/Submissions](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/Transport_energy_resilience/Submissions)

<sup>15</sup> Productivity Commission (2011), *Carbon emission policies in key economies*, [http://www.pc.gov.au/data/assets/pdf\\_file/0016/114244/carbon-prices-supplement.pdf](http://www.pc.gov.au/data/assets/pdf_file/0016/114244/carbon-prices-supplement.pdf), page 21.

<sup>16</sup> Productivity Commission (2011), *Carbon emission policies in key economies*, [http://www.pc.gov.au/data/assets/pdf\\_file/0016/114244/carbon-prices-supplement.pdf](http://www.pc.gov.au/data/assets/pdf_file/0016/114244/carbon-prices-supplement.pdf), page 22.

The arguments surrounding particulate matter emission benefits from E10 are also not definitive with one recent Australian report in particular concluding that E10 blend from wheat starch waste emits 24 milligrams of PM10 per kilometre whereas RUP emits only 18 milligrams. Whilst other reports claim reduced particulate matter emissions, there are increased evaporative emissions of smog forming organic compounds which may have a negative impact on air quality<sup>17</sup>. The US EPA has also determined that its biofuels legislation will adversely increase ozone concentrations over much of the U.S, by as much as 1 ppb<sup>18</sup>. Stanford University has additionally modeled to assess how the air pollution in the U.S. would react if vehicles transferred to a fuel that was a blend of 85 percent ethanol and 15 percent gasoline. It found that whilst levels of the cancer-causing agents benzene and butadiene dropped, formaldehyde and acetaldehyde rose. The study in fact determined that burning ethanol adds 22 percent more hydrocarbons to the atmosphere than does burning gasoline and this would lead to a nearly two parts per billion increase in tropospheric ozone<sup>19</sup>.

The NSW ethanol mandate additionally provided no preferential treatment for second generation or advanced biofuel production meaning that the disadvantages of current technologies are perpetuated and investment in superior technology is stymied.

Concerns regarding the negligible environmental benefits have prompted a number of reports to conclude that the industry should not receive Government assistance and protection on these grounds;

The Federal Government Taskforce on biofuels concluded that *'greenhouse gas benefits alone would not warrant further assisting biofuels, given the availability of much cheaper carbon reduction options'*<sup>20</sup>.

The Victorian inquiry into biofuels concluded that *'achieving emission reductions through existing emissions trading markets were 5 times less expensive for Government than support for biofuels production'*.

The report *'Biofuels - at what cost?'* by the International Institute of Sustainable Development found that *State and Federal Government biofuels industry assistance could achieve 100 times the reduction in greenhouse gases if it were instead used to purchase CO2 equivalents through the Chicago Climate Exchange'*<sup>21</sup>.

It is for these reasons that the former Labor Government in NSW has understandably and quietly over time changed 'environment' as the primary alleged benefits from the mandate legislation to a distant secondary. This is evidenced by the Hansard statements by the Hon. Tony Kelly regarding ethanol in November 2005<sup>22</sup> and on both the 9<sup>th</sup><sup>23</sup> and 30<sup>th</sup> May 2007<sup>24</sup> in which climate change was the first benefit mentioned. However, over time the former NSW Labor Government re-categorised the alleged climate change benefits as the evidence began to materialise they were not only contentious but arguably illusory.

While the arguments in favour of mandate are few and contentious at best, the arguments in opposition to mandates are many and have been backed up by numerous Government reports.

<sup>17</sup> CSIRO report (2007), *'Biofuels in Australia – Issues and prospects'*, page 25.

<sup>18</sup> US EPA (2010), *Air quality impacts of increased use of ethanol under the United States' Energy Independence and Security Act*, Sourced from the internet [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6VH3-511C05T-2&\\_user=10&\\_coverDate=09%2F15%2F2010&\\_rdoc=1&\\_fmt=high&\\_orig=gateway&\\_origin=gateway&\\_sort=d&\\_docanchor=&\\_view=c&\\_searchStrId=1708658700&\\_rerunOrigin=google&\\_acct=C000050221&\\_version=1&\\_urlVersion=0&\\_userid=10&md5=3c409ba3aae65e7a466c89eea33acf79&searchtype=&\\_](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VH3-511C05T-2&_user=10&_coverDate=09%2F15%2F2010&_rdoc=1&_fmt=high&_orig=gateway&_origin=gateway&_sort=d&_docanchor=&_view=c&_searchStrId=1708658700&_rerunOrigin=google&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=3c409ba3aae65e7a466c89eea33acf79&searchtype=&_)

<sup>19</sup> <http://www.scientificamerican.com/article.cfm?id=reduce-air-pollution-do-not-rely-on-ethanol>

<sup>20</sup> Australian Government, *Report of the Biofuels Taskforce to the Prime Minister*, op. cit., p. 7.

<sup>21</sup> International Institute of Sustainable Development (2008), *'Biofuels – at what cost?'*

<sup>22</sup> <http://www.parliament.nsw.gov.au/Prod/parlment/hansart.nsf/0/1FC0253850548707CA2570D4002B3CD6>

<sup>23</sup> <http://www.parliament.nsw.gov.au/Prod/parlment/hansart.nsf/0/2F2BE9471DCFAC6ACA2572F900236768>

<sup>24</sup> <http://www.parliament.nsw.gov.au/Prod/parlment/hansart.nsf/0/C1C4CA4357ABCC47CA2572DF000B7F16>



## What are the arguments in opposition to mandates?

### 1. They increase grain, molasses and food prices

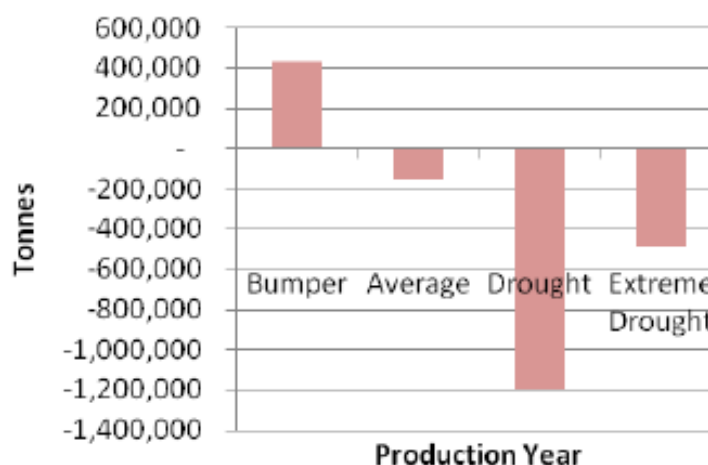
Ethanol mandates place inflationary pressure on grain, molasses and food prices. Notably, the alliance is not opposed to ethanol nor increased competition for grain. However, we are staunchly opposed to Government intervention which artificially increases grain prices.

In Qld, 57% of current ethanol production is sourced from grain (principally sorghum) with the remaining 43% sourced from molasses. A Government imposed mandate would impose an inflexible and artificial demand for ethanol and hence grain and molasses meaning that during dry and hence low grain and molasses production years, a considerable portion of each prospective crop will be diverted to fuel and not food production.

In a normal season, 80% of Australia's east coast grain production is consumed by intensive livestock industries. During drought periods this percentage increases greatly as exports diminish. These industries do not receive Government assistance yet directly compete with the Government assisted ethanol sector for grain.

The combination of a repeat of the 2002/03 drought (a likely event given climate change predictions) and a 10% mandate (the Katter Australian Party's preference) would result in a 50% increase in sorghum demand and over 22% of the states sorghum crop being diverted to ethanol. With a reduced amount of grain left for food production and grain imports unavailable due to Australia's strict quarantine rules, grain prices will inevitably increase. Given that grain is the major cost of production for the beef, pork, eggs, chicken and dairy industries, ethanol mandates therefore artificially increase grain and food prices and reduce international competitiveness.

**Southern Queensland grain supply and demand balance<sup>25</sup>**

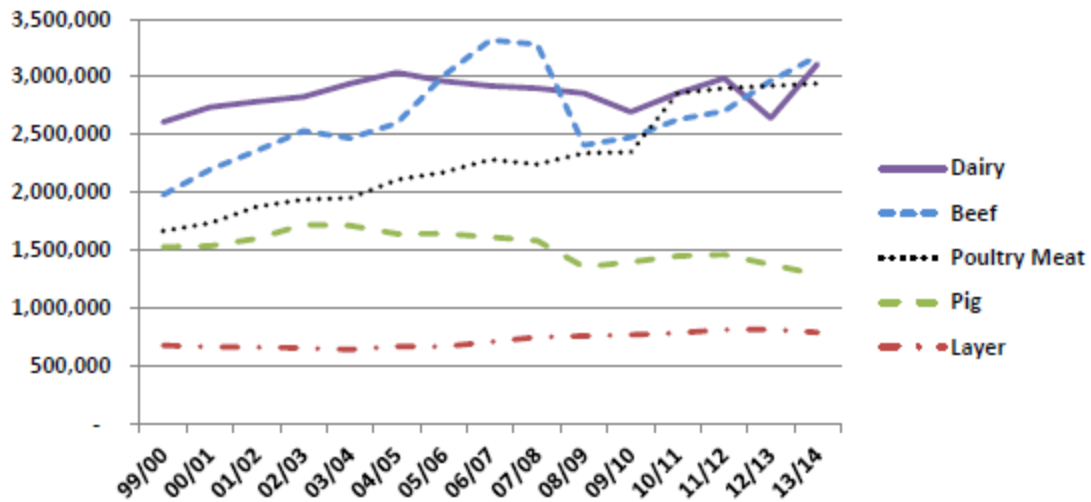


The southern Queensland region (where the majority of grain for the Dalby biorefinery is sourced) has the highest feedgrain usage in Australia. This usage is increasing over time as can be seen in the below graph. The region in a normal year is a net importer of grain from other states (see above graph). In bumper cropping years there is a surplus of grain available for export or transfer to other regions. However, during drought years, Southern Queensland generally has a major grain deficit, almost 1.2 million tonnes during early drought periods and declining to 490,000t as drought intensifies and feed grain demand declines due to unviable grain

<sup>25</sup> JCS Solutions, 'Benefit to Australian Grain Growers in the Feed Grain Market', Oct 2008, page 52

prices for animal feeding. Notably, these figures whilst including grain demand in the form of seed, flour, malt and feed grain, did not include the 207kt demanded annually by the Dalby biorefinery. Accordingly, it is reasonable to expect that in future, grain deficits in the area will be significantly aggravated by the ethanol mandate (even in non drought years).

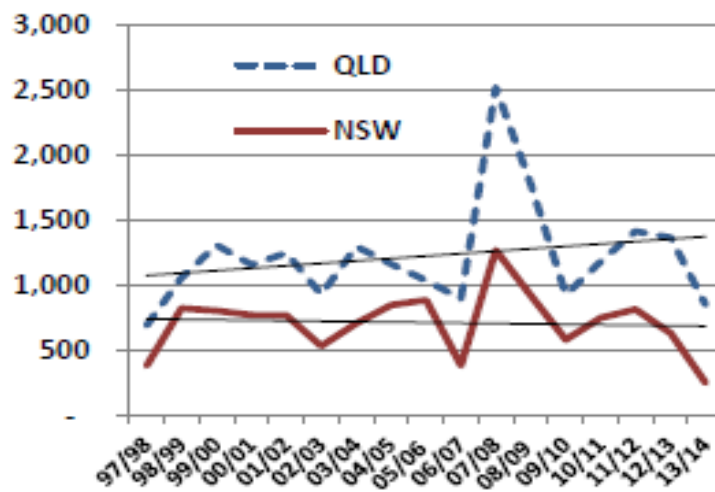
**Australian feed grain use by industry sector over time**



Source: JCS Solutions estimates

The Queensland sorghum crop is characterized by significant volatility. This is important given that 57% of current ethanol production sourced from sorghum. Over the last decade for example, the sorghum harvest has varied by as much as 260% (including over 160% between years) as non-controllable variables such as the size and timing of rainfall events along with other factors such as market prices came into play. During these low grain production periods, grain has had to be imported from other states including from Victoria, South Australia and Western Australia. It is for this reason that the imposition of biomass based mandates in Australia cannot be compared to other countries such as the US and Brazil given our unreliable climate and its impact upon grain and molasses production.

**Qld sorghum production over time ('000 tonnes)**



Source: ABS Agricultural Commodities and ABARES Crop Reports.

The argument that the Qld sorghum is a crop grown for cattle, poultry and pigs (and not human consumption) is misleading as such livestock produce beef, pork, chicken, eggs and dairy products which ARE directly consumed by humans. Given that sorghum is the highest cost of production in these livestock industries, an

ethanol mandate will decrease sorghum supply and increase the prices of beef, pork, chicken and dairy products.

In addition, with 43% of the states ethanol production sourced from molasses, a mandate which artificially increases demand for this product will lead to less molasses being available for drought affected cattle producers (molasses is a key drought supplement for cattle). Nearly twice as much molasses per year is sold to the livestock industry as compared to the ethanol sector. Acute molasses shortages have occurred in recent droughts and an ethanol mandate would exacerbate this shortage in times of drought.

It is understood that the Queensland Government intends to introduce a clause in the mandate legislation which enables the mandate to be suspended should a natural disaster occur. This will not address our concerns as invariably the mandate will only be suspended after the impact on grain and molasses prices is felt. As with all Government intervention, legislation is blunt instrument that lacks the nuances, timeliness and effectiveness of the normal market mechanism.

## 2. They increase the amount consumers pay for fuel

Ethanol mandates also increase fuel prices. This is because ethanol mandates force service stations to convert their bowsers to handle ethanol blends at the expense of Regular Unleaded Petrol (RUP) thereby forcing consumers with engines that are E10 incompatible to purchase more expensive premium unleaded fuel (as RUP becomes increasingly unavailable). NSW fuel retailers for example have reduced regular unleaded petrol sales by 73% since their mandate was announced in February 2007. This has occurred despite the fact that the NSW mandate legislation no longer requires all regular grade unleaded petrol to be replaced with E10. Over the same time, the mandate has led an increase in the sales of premium unleaded in NSW by 124%<sup>26</sup>. Notably, the increase in sales of premium unleaded in other states over the same period was only 26%<sup>27</sup>.

In Queensland around 15 percent of cars are unable to use ethanol blended fuel along with all motorcycles, lawn mowers, wipper snippers, marine engines, chain saws, industrial and farming equipment (such as pumps). In total, around 50% of all petrol powered engines are incompatible with E10 due to its corrosive, moisture attraction and shorter shelf life properties. Such engines comprise around \$1 million worth of sales each year with each family owning two on average. Accordingly, every consumer in the state will be forced to pay nearly 16c/ litre more for premium unleaded as RUP becomes increasingly unavailable due to an ethanol mandate. The Motormouth website reports that the price differential between the cheapest available regular unleaded and cheapest premium unleaded petrol in May 2015 in Brisbane was 15.8c/ L (ie 122.9 vs 138.7). This price disparity will only widen under a mandate as consumer demand for premium unleaded will increase.

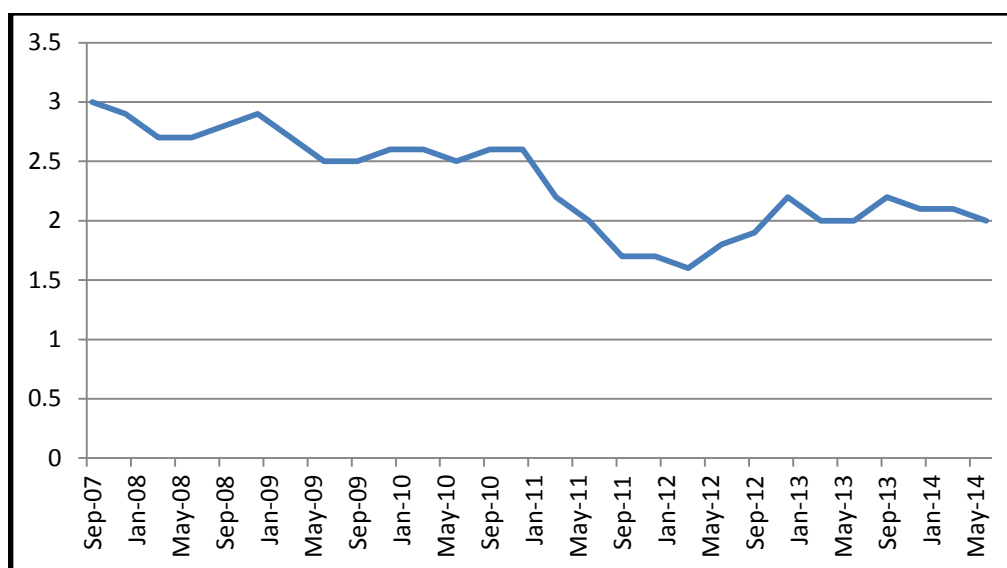
The policy outcome is no better for owners of E10 compatible engines, with consumers forced to pay more for fuel as the discount at the bowser for E10 has historically never offset its inferior fuel economy compared to RUP. This is because 1 litre of ethanol contains 33% less energy than 1 litre of RUP, which means that cars that use ethanol require more fuel by volume to travel the same distance and because the fuel excise subsidy provided to the sector has never been fully passed on to consumers in the form of lower prices. Given E10's poorer fuel economy, the RACQ has determined that at current prices it needs to be priced at least 4.5c/ litre less than RUP in order for motorists to achieve the equivalent value for money. However, despite nearly \$1 billion in Government subsidies since 1980, the ACCC has reported that the ethanol sector has never provided to consumers a discount which offsets its inferior fuel economy - the discount has in contrast reduced over time (see graph below). The ethanol industry profiteering from the fuel excise subsidy was also outlined in the 2014 BREE report which found that \$66 million of the \$108 million rebate in 2013 (ie 61%) was retained by ethanol producers/ suppliers rather than passed onto motorists in the form of lower E10 prices at the pump (as originally intended)<sup>28</sup>. Accordingly, the argument that ethanol is cheaper than RUP is disingenuous at best.

<sup>26</sup> Department Industry and Sciences (2015), Australian Petroleum Statistics, sourced from the internet, <http://www.industry.gov.au/Office-of-the-Chief-Economist/Publications/Pages/Australian-petroleum-statistics.aspx>

<sup>27</sup> ACCC (Dec 2014), *Monitoring of the Australian petroleum industry*, sourced from the internet [https://www.accc.gov.au/system/files/897\\_ACCC\\_Petrol%20Monitoring%20Report\\_FA\\_web.pdf](https://www.accc.gov.au/system/files/897_ACCC_Petrol%20Monitoring%20Report_FA_web.pdf)

<sup>28</sup> BREE, *An assessment of key costs and benefits associated with the Ethanol Production Grants program*, February 2014

### Price differential between RUP and E10 since the NSW ethanol mandate was introduced<sup>29</sup>



Importantly, even at a 2% mandate, the NSW experience has shown that consumer choice at the bowser was increasingly removed with RUP sales dropping by 33% from the time when the 2% mandate was introduced in October 2007 to the time when it was increased to 4% in January 2010. It would be expected that the same outcome would occur in Queensland (even if the legislation did not require RUP to be removed) as service stations are incentivized to sell more premium unleaded whilst consumers don't want E10.

### 3. Consumers don't want ethanol

There have been numerous Federal and state Government along with major oil company campaigns attempting to spruik the benefits of ethanol to consumers over a number of decades. In fact, ethanol as a fuel has been utilised since the building of the first mass-produced motor vehicle and was used extensively in north Queensland from 1929 to 1957 under the Queensland Motor Spirit Vendor's Act<sup>30</sup>. Fuel ethanol has been marketed in New South Wales since 1994 while BP began marketing 10 per cent ethanol blend petrol in south-east Queensland in 2002. Accordingly, consumers have been aware of the positives and negatives associated with the product for a long time and have had ample opportunity to form an educated opinion.

Over time, consumers have made it clear that they don't want ethanol. Such opposition is due to concerns about engine damage, the price discount at the bowser does not offset its inferior fuel economy, and because new cars require premium unleaded or diesel.

Australian petroleum statistics confirm that over the last four years national demand for ethanol has declined by 23% whilst demand for diesel and premium unleaded has increased by 15% and 10% respectively<sup>31</sup>. Even in NSW, and despite their mandate, monthly sales of ethanol have reduced by 30% from 2010 compared to 2015<sup>32</sup>. According to the latest APAC biofuel consultants report Australian Biofuels 2014–15, (APAC report) ethanol demand in 2013–14 was 236 ML, a decrease of 48 ML (or around 17 per cent) from 2012–13.

<sup>29</sup> ACCC (2007-2014), *Monitoring of the Australian petroleum industry*, sourced from the internet [https://www.accc.gov.au/system/files/897\\_ACCC\\_Petrol%20Monitoring%20Report\\_FA\\_web.pdf](https://www.accc.gov.au/system/files/897_ACCC_Petrol%20Monitoring%20Report_FA_web.pdf)

<sup>30</sup> Bureau of Transport and Communications Economics, 'Alternative Fuels in Australian Transport', Information Paper 39, AGPS, Canberra, p. 51.

<sup>31</sup> Department Industry and Sciences (2015), Australian Petroleum Statistics, sourced from the internet, <http://www.industry.gov.au/Office-of-the-Chief-Economist/Publications/Pages/Australian-petroleum-statistics.aspx>

<sup>32</sup> Department Industry and Sciences (2015), Australian Petroleum Statistics, sourced from the internet, <http://www.industry.gov.au/Office-of-the-Chief-Economist/Publications/Pages/Australian-petroleum-statistics.aspx>

Such trends have led Holden to drop its E85 Commodore from its range. NSW Service stations have similarly not met the State's 6% mandate of ethanol content in regular unleaded petrol since it was increased from 4% in 2011 due to a lack of consumer demand (currently it is only 3.3%<sup>33</sup>).

#### **4. They assist some agriculture sectors at the expense of others**

Ethanol mandates also assist grain and sugar cane producers at the expense of beef, dairy, chicken, egg and pork producers. With grain on average the highest cost of production for intensive livestock sectors, any policy which automatically and compulsorily removes a portion of the grain crop, will lead to artificial inflationary pressure on grain prices. Accordingly, the Government policy, by increasing costs of production, imposes an effective tax on otherwise competitive agriculture industries (ie a negative externality) for the benefit of the ethanol industry which is both an uncompetitive and unviable without such support and assistance.

The cattle feedlot sector for example purchases millions of grass fed cattle each year. Accordingly, any Government intervention which distorts markets and leads to higher costs of production will only reduce feedlot cattle numbers at the expense of such cattle producers and the whole beef supply chain.

In addition, nearly twice as much molasses per year is sold to the livestock industry as compared to the ethanol sector. With molasses being a key drought supplement for grass fed cattle producers, drought requiring molasses to be imported in 2014, eighty per cent of the state still in this predicament, and the onset of El Nino set to extend such conditions, why would you introduce a policy that actually reduces the amount of molasses available to people in such dire circumstances and/ or increase the cost of this product?

ABS data confirms that without even taking into account intensive livestock producers, there is around 18,000 beef producers in the state, nearly double the number of sugar and grain producers combined. Accordingly, the net agriculture impact of the mandate will undoubtedly be negative.

Importantly, the alliance is not opposed to ethanol nor increased competition for grain. However, we are staunchly opposed to Government intervention which artificially increases grain and molasses prices.

Moreover, given this negative externality impact on other agricultural sectors, it is arguable that any regional development benefits of a mandate to the ethanol sector will be offset by its negative regional development impacts on such industries, particularly with respect to their future expansion potential.

#### **5. They perpetuate the reliance on first generation ethanol technology**

Ethanol mandates traditionally do not provide any preferential treatment and hence commercial incentives for investment in superior second generation ethanol technologies despite the fact that such technology is known to be more cost-effective, environmentally beneficial whilst having greater energy output to input ratios than grain based ethanol production. They also mitigate 'food versus fuel' issues. As a result, ethanol mandates perpetuate the disadvantages of current technologies and investment in superior technology is stymied.

#### **6. They impose large infrastructure costs on service stations**

The service station sector is also concerned about the infrastructure costs of ethanol mandates, the inability to meet the mandated supply targets and the oligopoly concentration and hence market power of the three ethanol suppliers in Australia.

It is estimated that the capital cost to put in place purpose built storage, distribution and transport infrastructure upgrades to handle ethanol's moisture attraction and corrosion properties is between \$500,000-

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<sup>33</sup> ACCC (Dec 2014), *Monitoring of the Australian petroleum industry*, sourced from the internet [https://www.accc.gov.au/system/files/897\\_ACCC\\_Petrol%20Monitoring%20Report\\_FA\\_web.pdf](https://www.accc.gov.au/system/files/897_ACCC_Petrol%20Monitoring%20Report_FA_web.pdf)

\$900,000 per site. In total, the cost of a full mandate (i.e. requiring E10 in all 1380 service station sites in QLD) would be around \$380 million. These costs will be passed onto consumers in the form of higher fuel prices.

Importantly, 80% of the 1380 fuel outlets that serve Queensland motorists are owned by small to medium business owners (not big oil companies as is commonly asserted by the ethanol lobby). As a consequence, it is these small businesses that will be required to shoulder the vast majority of the capital burden required to accommodate E10 in the future – not the oil majors. Contrary to public perceptions, these businesses run very lean netting 1.1cpl from annual fuel sales – which equates to \$0.50 gross profit per vehicle – and are capital poor.

## **7. They potentially threaten Australia's trade negotiations**

Australia's stance at the World Trade Organisation is to reduce industry Government assistance, protection and regulation; not increase it. The limited Government assistance and protection provided to Australian agriculture has provided Australia a strong platform to advocate strongly for trade liberalisation among what is a highly protected market place for our primary products.

An increase in such support and protection for the ethanol sector (and in turn the grain and sugar industries) will potentially threaten our 'moral high ground' stance and hence trade negotiation efforts.

Importantly, the largest Government benefit provided to the ethanol sector, the Commonwealth Government's fuel excise relief, is a subsidy as GATT rules unequivocally states that a subsidy includes the non-payment of a tax. Whilst the recently carried *Excise Tariff Amendment (Ethanol and Biodiesel) Bill 2015* will require ethanol manufacturers to pay the fuel excise from July 2016 at gradually increasing levels, at the end of the phase in period in July 2020 such manufacturers will still only have to pay 33% of the full 38.143 c/L excise. Moreover, ethanol imports will still be effectively banned as at the end of the phase in period, as such product would still incur the full excise amount as a customs duty.

## **8. Government ethanol industry assistance and protection policies have all failed**

No ethanol industry in the world is able or willing to wean itself from significant 'infant industry' type Government support. No other industry in Australia receives a Government imposed guaranteed demand for its product.

History has demonstrated that infant industry assistance leads to complacency, inefficiency and incentives to continue 'rent seeking' lobbying behaviour to maintain such support rather than become competitive. The example of the Dalby bio-refinery going in and out of business proves that Government's should not provide such assistance for industries that are unable to be commercially viable without it.

The Australian car manufacturing industry has demonstrated that infant industry assistance is an abject failure.

Moreover, despite the assertions in the discussion paper, the ethanol industry is not new, has had policy certainty for decades and has had ample opportunity to grow and develop through numerous Government assistance and protection policies implemented back to back over the last 35 years. For example, the subsidies and import protection provided by various Commonwealth Government fuel excise relief programs has been in place since 1980. Such programs have included exemption of ethanol from excise (1980); introduction of an ethanol bounty (1994); the Biofuels Capital Grants Program (BCGP) (2003); the Ethanol Distribution Program (EDP) (2006); and the Ethanol Production Grants Program (EPGP) (2002).<sup>34</sup> The EPGP was introduced in 2002, originally as a short-term subsidy 'while longer term arrangements were considered by government'. However, the EPGP was extended three times: in 2003, 2004 and 2011.

<sup>34</sup> Australian National Audit Office review of the EPG program (2014) sourced from the internet <http://www.anao.gov.au/Publications/Audit-Reports/2014-2015/The-Ethanol-Production-Grants-Program/Audit-summary>

Accordingly, given that 35 years has elapsed since assistance and protection measures for the Australian ethanol industry were implemented, it is erroneous to suggest (as is stated in the discussion paper), that the ethanol industry has not had policy certainty or the opportunity to develop.

Such assistance has been substantial and has amounted to around \$1 billion since 1980. The Commonwealth Government's Ethanol Production Grants Program (EPGP) alone provided an \$895 million subsidy to the sector over the 2002-15 period. Notably 70% of this subsidy benefit (\$543.4 million) went to Manildra. The Biofuels Capital Grants Program has provided a subsidy of \$37.6 million to the sector to date, the Ethanol Distribution Program \$14.3 million and the ethanol bounty \$25 million. In total the subsidy benefits provided to the ethanol sector from these programs adds up to \$972 million.

Notably, such figures also don't take into account the benefit from the effective ban on ethanol imports and other federal and state Government programs which have supported and protected the sector. Such programs for example relate to consumer education and streamlining planning approvals (among others).

The Minister has touted the potential regional development benefits of a mandate in citing a Deloitte report in several media statements recently. Notably however, the report does not focus on the cost benefits of a mandate, merely the potential benefits should all future proposed bio-refinery projects proceed, a large assumption given only one out of fifteen projects since 2002 have eventuated. Importantly the report recommends that subsidies should not be provided to the sector as this leads to a misallocation of resources and scarce public funds being captured by owners of subsidised businesses.

Numerous Government reports have determined that all ethanol assistance policies have been an abject failure<sup>353637</sup>:

*The Australian Competition and Consumer Commission, in its various annual petrol monitoring reports over a number of years, have concluded that the NSW mandate has reduced the availability of regular unleaded from retail sites, reduced consumer choice (given that some motorists cannot use, or choose not to use E10 in their vehicles) and forced consumers to pay more for their fuel (given the reduced availability of RUP). The 2013/14 report for example, stated that the NSW mandate is likely to be a strong factor promoting greater demand for, and higher profits on, PULP by significantly reducing supply of RULP in that state. It also stated that total sales of E10 in Australia in 2013-14 decreased by around 5 per cent from 2011-12, that whilst the NSW mandate requires 6% of all petrol to be E10, this was only around 3.3 per cent in 2013-14<sup>38</sup>. The report also stated that the demand for ethanol in NSW (despite its mandate) has been declining with a 9% decline reported in 2013/14. Moreover, the ACCC has reported that the E10 discount compared RUP provided to consumers between 2007 and 2014 has been reducing over time thereby meaning that motorists have become worse off due to E10's inferior fuel economy.*

*Numerous briefing documents sourced under freedom of information laws have also demonstrated that the NSW Treasury has routinely warned that the costs of the NSW mandate outweigh the benefits, there is no net benefit to motorists in terms of fuel prices, the environmental advantages are dubious, and that the only beneficiary was Manildra who have been given a legislated monopoly and a captive market<sup>39</sup>.*

*The Victorian Government decided to not pursue an ethanol mandate because the costs and risks were seen to outweigh any purported benefit<sup>40</sup>.*

<sup>35</sup> Department of Primary Industries and Energy, 'Portfolio Evaluation for the Ethanol Bounty Scheme', August 1996

<sup>36</sup> BREE, *An assessment of key costs and benefits associated with the Ethanol Production Grants program*, February 2014

<sup>37</sup> <http://www.smh.com.au/nsw/ethanol-benefits-thrown-into-doubt-20120514-1yn4g.html#ixzz2t4F2gntP>

<sup>38</sup> ACCC (Dec 2014), *Monitoring of the Australian petroleum industry*, sourced from the internet [https://www.accc.gov.au/system/files/897\\_ACCC\\_Petrol%20Monitoring%20Report\\_FA\\_web.pdf](https://www.accc.gov.au/system/files/897_ACCC_Petrol%20Monitoring%20Report_FA_web.pdf)

<sup>39</sup> Sydney Morning Herald (2012), sourced from the internet, <http://www.smh.com.au/nsw/ethanol-benefits-thrown-into-doubt-20120514-1yn4g.html>

<sup>40</sup> Economic Development and Infrastructure Committee (2008), *Inquiry into Mandatory Ethanol and Biofuels Targets in Victoria*, sourced from the internet, [http://www.parliament.vic.gov.au/archive/edic/inquiries/biofuels/Report/EDIC\\_BIOFUELS\\_REPORT\\_2008.pdf](http://www.parliament.vic.gov.au/archive/edic/inquiries/biofuels/Report/EDIC_BIOFUELS_REPORT_2008.pdf) page xxv.

*The Federal Government decided to not implement a mandate because no prima facie case had been established, the objectives of the mandate could be achieved by other less costly Government policies and that the unintended consequences of mandates were many<sup>41</sup>.*

*The Queensland Government in its 2009 qualitative public benefit test analysis also concluded that there was no net benefit from an ethanol mandate.*

*The BREE report into the failure of the Commonwealth EPGP could not be more damning of the policy and Government assistance towards the sector in general. The conclusion has important relevance to the Qld Government regarding its proposed mandate, particularly with respect to espoused arguments about the mandate benefits in terms of regional development, the environment, fuel security and agricultural producers (see following table extract from this report).*

**In 2014, the Bureau of Resources and Energy (BRE) assessed the costs and benefits of the Ethanol Production Grants program.<sup>[3]</sup> The assessment found that the EPG has little merit. The BRE's findings include:**

- **the EPG distorts resource use in the economy by retaining resources in an uneconomic industry**
- **the financial cost to the taxpayer is significant**
- **regional employment and greenhouse gas abatement are relatively modest but come at a very high cost**
- **there is no real benefit to liquid fuel security**
- **there is no net benefit to agricultural producers**
- **the industry is unlikely to be viable in the absence of the EPG**
- **while the program supported an additional lower priced fuel product, the benefits to motorists were less than they should have been; and**
- **there was no evidence that provision of support for the Australian ethanol industry provided downward pressure on petrol prices.**

**The benefit to motorists in the form of lower prices for petrol containing ethanol is also limited. The Australian Competition and Consumer Commission found that in 2012–13, petrol containing 10 per cent ethanol (E10) was, on average, around only two cpl cheaper than regular unleaded petrol despite E10 having the advantage of the grant.<sup>[4]</sup>**

**In sum, the removal of the EPGP will reduce the distortion of resources in the economy by reducing protection to an uneconomic industry, and contribute to the goal of reducing the budget deficit through net savings<sup>1</sup>.**

*The previous Ethanol Bounty was similarly removed in the 1996/97 federal budget because it did not achieve its objectives<sup>42</sup>. The Minister's decision was based on a report by the Bureau of Resource Sciences, the Australian Bureau of Agricultural and Resource Economics and a steering committee representing five departments that recommended the bounty cease. An evaluation of the Scheme concluded that the environmental benefits were ambiguous, and that the production and use of fuel ethanol was not cost-effective in reducing greenhouse gas emissions. The Scheme was terminated one year early, in the August 1996 Budget.*

Mandates have also been proven to not only be a failure in Australia:

*'In a recent assessment of the 64 mandates around the world by the Global Development And Environment Institute, it concluded that governments should cease the implementation and expansion of current food - based biofuels consumption mandates and to forgo the creation of new mandates<sup>43</sup>.*

<sup>41</sup> Parliamentary Research Paper (2008), *The Economic Effects of an Ethanol Mandate*, sourced from the internet, [http://www.aph.gov.au/About\\_Parliament/Parliamentary\\_Departments/Parliamentary\\_Library/pubs/rp/RP0708/08rp18](http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/RP0708/08rp18)

<sup>42</sup> Hon. W Parer, 'Ethanol Bounty Scheme Ended', Media Release, 21 August 1996.

<sup>43</sup> GDEI (2015), *Mandating Food Insecurity: The Global Impacts of Rising Biofuel Mandates and Targets*, sourced from the internet, <http://ase.tufts.edu/gdae/Pubs/wp/15-01WiseMandates.pdf>



*'In an OECD report regarding various member countries Government's assistance and protection towards biofuels concluded that all Governments should cease creating new mandates for biofuels and investigate ways to phase them out'<sup>44</sup>.*

*'India has had an E5 ethanol mandate in place since 2008, which requires oil companies to sell petrol blended with at least 5% of ethanol. Five years on, oil companies have sourced just 440 million litres of ethanol against a target of 1.05 billion litres for the 5% mix. The blended petrol is available only in 13 out of 28 states, and even there, the extent of blending is just 2%. Its goal of a 20% biofuel blend by 2017 looks tough to achieve, according to market sources'<sup>45</sup>.*

*'In a Harvard University working paper regarding the US mandate, it was concluded that there is a growing list of concerns about their impact and that they do not represent the most efficient or precise instrument to meet any of the policy's stated goals'<sup>46</sup>.*

*'Indonesia has a 2% ethanol mandate, but it is not implemented as the price is high in spite of subsidies and consumers are not willing to pay the cost of going green'<sup>47</sup>.*

*'The Philippines was to have fully implemented its E10 mandate, making it compulsory to sell unleaded, premium and special gasoline products with at least 10% ethanol blended in, on April 1, 2013. But it has been postponed twice so far'<sup>48</sup>.*

The US Government (long considered the precedent that Australia should follow regarding Government biofuels policy) began removing its assistance and protection for its biofuels industry with the removal of tax credits and import tariffs in December 2011. The Federal Government has also amended legislation to reduce such assistance following numerous damning reports of the failure of the Ethanol Production Grants Program.

In short, the failure of Government assistance and protection policies for the ethanol sector is demonstrated by the fact that:

1. Despite receiving nearly \$1 billion worth of fuel excise subsidies alone, there are still only three ethanol producers in Australia. Notably, when the EPGP was introduced in 2002-03, it was suggested that up to a further 15 domestic ethanol plants might be established across Australia. Only one subsequently eventuated. Given declining demand for ethanol, it is extremely unlikely that more plants will be constructed. This conclusion is reinforced by the recent APAC report which cautions that into the future:

*...unless there is a material change in the fuel ethanol market place, history shows that the likelihood of there being a need for additional ethanol capacity beyond the existing capacity is slim. No new greenfield ethanol plant has been constructed in Australia since 2009 when the Dalby plant was commissioned'<sup>49</sup>;*

2. Ethanol comprises only 1 per cent of Australia's total road transport fuel mix;
3. There is decreasing not increasing consumer demand for the product despite numerous state and Federal Government programs to 'educate' consumers;

<sup>44</sup> OECD (2007), *Biofuels – Is the Cure Worse than the Disease?* Sourced from the internet; <http://apo.org.au/research/biofuels-cure-worse-disease>. p 42

<sup>45</sup> Insight magazine (2013) *Asian ethanol mandates - shifting goalposts*, sourced from the internet, <http://russia.platts.com/IM.Platts.Content%5Caboutplatts%5Cmediacenter%5Cpdf%5Cinsight-oct13-goalposts.pdf>

<sup>46</sup> Lawrence, R. Z (2010), *How Good Politics Results in Bad Policy: The Case of Biofuel Mandates*. Center for International Development, Harvard University, sourced from the internet .

<sup>47</sup> Insight magazine (2013) *Asian ethanol mandates - shifting goalposts*, sourced from the internet, <http://russia.platts.com/IM.Platts.Content%5Caboutplatts%5Cmediacenter%5Cpdf%5Cinsight-oct13-goalposts.pdf>

<sup>48</sup> Insight magazine (2013) *Asian ethanol mandates - shifting goalposts*, sourced from the internet, <http://russia.platts.com/IM.Platts.Content%5Caboutplatts%5Cmediacenter%5Cpdf%5Cinsight-oct13-goalposts.pdf>

<sup>49</sup> AC biofuel consultants, *Australian Biofuels 2013–14* (October 2014)

4. The discount for ethanol relative to RUP has been reducing over time, despite the significant Government assistance and protection provided to the ethanol sector, much of it designed to specifically increase this discount. Accordingly, the inferior fuel economy of E10 is only being exacerbated to consumers detriment whilst the ethanol sector has pocketed such subsidies;
5. The taxpayer cost for such policies have been large whilst the benefits have been small and declining over time.

How long should tax payers be forced to support and protect an uneconomic and non viable ethanol industry, particularly given the failure of such policies and the negative externality impacts upon consumers and other industries? When is the age of entitlement over?

## **Specific comments in response to the discussion paper**

### **1. Will the changes to excise arrangements proposed by the Federal Government have an effect on the use of biofuels by consumers?**

Consumer demand for ethanol has been declining, despite the \$1 billion provided in subsidies to the ethanol sector via the EPGP, the mandate in NSW and numerous consumer education programs undertaken by Government and industry alike over many decades.

As stated previously, the E10 discount over RUP provided to consumers has been declining over time thereby demonstrating that the ethanol sector has been increasingly disinclined to pass on the benefits of the EPGP subsidy in the form of lower E10 prices relative to RUP.

The Alliance believes that consumer demand will continue to decline and questions why the mandate should be implemented given that consumers have made it clear that they don't want ethanol.

### **2. What measures can be taken to offset any possible negative impacts by the proposed changes to excise arrangements by the Federal Government?**

It should be pointed out that the Federal Government removed the EPGP because the costs to tax payers were large yet the benefits were small and declining. Accordingly, removal of the EPGP for the sector will only provide a net benefit to tax payers and society at large. This should be any Government's overriding consideration.

### **3. Is a two per cent ethanol mandate appropriate?**

The Alliance believes that the costs and risks of any mandate will outweigh its benefits. It is a distortionary Government policy that should never be contemplated. No industry should be entitled to a Government imposed demand for its product particularly if consumers don't want it and the industry is uneconomic without it.

We also believe that the negative impacts of a 2% mandate with respect to its impacts upon grain and molasses prices (and hence food prices) will also depend on the severity of future droughts. As it is impossible to foresee such impacts, it is best to not implement such a policy.

The Alliance also believes that any tacit approval of a 2% mandate is tantamount to supporting a larger mandate into the future.

### **4. Should the percentage increase, and if so, over what time period should any increases occur?**

The Alliance is not supportive of any mandate proceeding.

**5. What is an appropriate mandated percentage for biodiesel?**

The Alliance concerns are primarily related to grain and molasses derived ethanol rather than biodiesel. However, the poultry and pork members of the alliance are also concerned about the impact of the proposed mandate on tallow prices (a primary feedstock for biodiesel production).

**6. What timeframe would stakeholders need to prepare for and meet this requirement?**

See above answer.

**7. When do you think that a mandate will no longer be necessary?**

Government assistance and protection for the Australian ethanol sector has been in place since 1980. Over this time, around \$1 billion has been provided to the sector (more per litre of ethanol produced than any other country)<sup>50</sup>. Over this 35 year period, not only has significant Government support and protection been provided but also significant policy certainty. Moreover, the sector has benefited from other state and federal Government programs including numerous ones related to consumer education. Accordingly, the Alliance believes that the ethanol sector has had ample opportunity to grow, develop and become competitive. The fact that this has not occurred, should not be a matter for Government's to resolve in perpetuity.

**8. Is the class of retailer appropriate? Should the definition be expanded to include those with less retail sites?**

This question is best answered by organisations that represent the petroleum sector.

**9. Is there an alternative method of defining the retailer? For example, should all sites that sell three or more petrol blends be included under the definition? Or should all sites that trade over a certain volume of fuel be included?**

This question is best answered by organisations that represent the petroleum sector.

**10. Is this level of detail appropriate for liable entities?**

This question is best answered by organisations that represent the petroleum sector.

**11. Is there any other data or information that should be requested in the quarterly reports?**

This question is best answered by organisations that represent the petroleum sector. However, the Alliance would also encourage the quarterly reports to also collate data across the state on:

- the E10 discount relative to RUP (to ensure that the proposed mandate benefit is being passed onto consumers in the form of lower prices that offset its inferior fuel economy. The RACQ has determined that the E10 discount should be in the order of 4.5c/ L);
- the number of sites that sell E10 and RUP (to determine whether service stations are removing the availability of RUP as has occurred in NSW).

**12. Can this information and data be used in other ways to support industry?**

This question is best answered by organisations that represent the petroleum sector.

**13. To ensure that the exemption framework is effective, what would be a reasonable timeframe for response to a request for exemption?**

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<sup>50</sup> International Institute of Sustainable Development – 'Biofuels – at what cost?' 2008

This question is best answered by organisations that represent the petroleum sector.

**14. How can government ensure that an exemption framework is not used as a way for liable parties to negate their responsibilities?**

The Alliance would caution that such parties should not be held liable if consumers refuse to purchase ethanol as has occurred around Australia (including NSW). The Alliance also questions the principle of imposing costs and penalties upon fuel retailers who will invariably pass on such costs to consumers through higher fuel prices. This again points to the lack of equity associated with this distortionary policy.

**15. Are these penalties appropriate?**

This question is best answered by organisations that represent the petroleum sector.

**16. Do they incentivise liable parties to meet their obligation?**

This question is best answered by organisations that represent the petroleum sector.

**17. If the mandate increases should the penalties change?**

See answer to question 14.

**18. Should Queensland have an expert panel or implementation board? If so, which sectors should be represented?**

While the Alliance is opposed to the concept of the proposed mandate, if it is to proceed, we would support having representatives on the panel that are broader than the ethanol sector given that its inevitable negative impacts over time are likely to be downplayed by this vested interest group. From a grain and molasses perspective, we would encourage seeking representation from GrainCorp who has a good understanding of grain and molasses supply and demand fundamentals along with inventory levels. We would also support having representation from the independent service station peak body ACAPMA.

**19. How can the panel discharge their responsibilities appropriately and facilitate the required mandate being met?**

This can only be achieved through clear and transparent terms of reference, legislation and sufficient and appropriate representation from the key stakeholder groups impacted.

**20. Are these sustainability principles appropriate?**

While opposed to the mandate, the Alliance is comfortable with these principles. Given that the environmental benefit of biofuels, in particular first generation ethanol production, is dubious, it is important that such requirements be implemented.

**21. Should more stringent environmental measures be applied to the biofuel sector?**

See answer to question 20.

**22. What other environmental risks must be considered in relation to an expanded biofuels industry?**

See answer to question 20.

**23. How should they be enforced?**

See answer to question 20.

**24. What are the issues that need to be addressed if consumer choice is maintained?**

The Alliance contends that regular unleaded sales will continue to decline (and hence choice removed) as service stations need to replace one fuel type in order to meet the mandate requirements to sell E10. Given that premium unleaded and diesel demand is increasing, service stations will accordingly be forced to replace RUP bowsers with E10.

NSW fuel retailers for example have reduced regular unleaded petrol sales by 73% since their mandate was announced in February 2007. This has occurred despite the fact that the NSW mandate legislation no longer requires all regular grade unleaded petrol to be E10. Over the same time, the mandate has led an increase in the sales of premium unleaded in NSW by 124%. Notably, the increase in sales of premium unleaded in other states over the same period was only 26%. Even in NSW, and despite their mandate, monthly sales of ethanol have reduced by 30% from 2010 compared to 2015, indicating that consumers are not demanding the product.

**25. Will choice of fuel increase costs to retailers or consumers?**

Ultimately, consumers will pay the costs of retailers being forced to install infrastructure to meet the requirements of the proposed ethanol mandate. The Australasian Convenience and Petroleum Association (the peak body for independent service stations) has indicated that the implementation costs to meet the mandate requirements will be around \$380 million. These costs will be passed onto consumers in the form of higher prices. ACAPMA has indicated that this will potentially be up to 10c/ L. Again, the Alliance questions why competitive industries should be forced to incur costs on behalf of an unprofitable and uneconomic ethanol sector which is receiving a Government imposed demand for a product that consumers don't want?

**26. Would a targeted education campaign on the actual benefits and disadvantages of biofuels/ E10 contribute to informed consumer choice?**

There have been numerous Federal and state Government along with major oil company campaigns attempting to spruik the benefits of ethanol to consumers over a number of decades. In fact, ethanol as a fuel has been utilised since the building of the first mass-produced motor vehicle and was used extensively in north Queensland from 1929 to 1957 under the Queensland Motor Spirit Vendor's Act. Fuel ethanol has been marketed in New South Wales since 1994 while BP began marketing 10 per cent ethanol blend petrol in south-east Queensland in 2002. Accordingly, consumers have been aware of the positives and negatives associated with the product for a long time and have had ample opportunity to form an educated opinion.

Over time, consumers have made it clear that they don't want ethanol. Such opposition is due to concerns about engine damage, the price discount at the bowser does not offset its inferior fuel economy, and because new cars require premium unleaded or diesel.

Accordingly, the Alliance does not support such an education campaign.

**27. What are the key messages that must be included in any education campaign for biofuels? Who is the primary audience and what is the most appropriate mechanism to target them?**

See above answer.

**28. What options could we employ to protect consumers?**

Given the likely costs to consumers from ethanol mandates (in the form of higher food and fuel prices and removal of choice), the Alliance believes the best option to protect consumers is to not proceed with a mandate.

**29. How can we ensure that fuel companies pass the benefits of ethanol through to consumers?**

Given E10's poorer fuel economy, the RACQ has determined that at current prices it needs to be priced at least 4.5c/ litre less than RUP in order for motorists to achieve the equivalent value for money. However, the ACCC has reported that the ethanol sector has never provided to consumers a discount which offsets its inferior fuel economy with in fact the discount even reducing over time. The ethanol industry profiteering from the fuel excise subsidy was also outlined in the 2014 BREE report which found that \$66 million of the \$108 million rebate in 2013 (ie 61%) was retained by ethanol producers/ suppliers rather than passed onto motorists in the form of lower E10 prices at the pump (as originally intended). Given such history and the fact that it costs more to produce E10 than RUP, the Alliance does not believe that the ethanol sector will ever pass on such subsidies.

**30. What is an appropriate method for estimating a 'reasonable' ethanol price?**

E10 should be discounted by 'at least' an amount that offsets its inferior fuel economy relative to RUP.

**31. What is an appropriate balance between costs to consumers and the creation of regional jobs?**

The Alliance believes that the most effective approach to ensure that consumers are not negatively affected and net regional development impacts are positive, is to not proceed with the mandate. The regional development argument is flawed because the jobs created by a Government assisted ethanol industry are cost prohibitive and are more than offset by job losses in other more viable rural industries that compete with it for grain and molasses.

Numerous Government reports have concluded that ethanol assistance and protection measures are very modest or highly disputed. For example, the Bureau of Resources and Energy Economics has concluded that jobs created by a Government assisted biofuel industry were difficult to justify (160-200 direct jobs @ a cost of around \$545k to \$680k per job) and would be offset by job losses in other more viable rural industries that compete with the ethanol sector for grain such as dairy, beef, poultry and pork. The high cost of job creation means that it would be cheaper to pay each worker average weekly earnings to do nothing than to subsidise them to produce ethanol. In fact the report stated that for every dollar of tax payer investment, the regional benefit provided was valued at only \$0.30. This is hardly a good return for tax payer investment.

It is noteworthy to point out that when the Commonwealth Government's Ethanol Production Grants Program was introduced in 2002 03, it was suggested that up to a further 15 domestic ethanol plants might be established across Australia. Only one has subsequently eventuated. Given declining demand for ethanol, it is extremely unlikely that more plants will be constructed despite the comments in the discussion paper.

**32. Will an effective 'floor' in grain prices, as a result of a mandate signal to grain growers an opportunity to increase production and investment on-farm?**

The Alliance believes that the costs and risks of any mandate will outweigh its benefits. It is a distortionary Government policy that should never be contemplated. No industry should be entitled to a Government imposed demand for its product particularly if consumers don't want it and the industry is uneconomic without it.

We also believe that the negative impacts of a 2% mandate with respect to its impacts upon grain and molasses prices (and hence food prices) will also depend on the severity of future droughts. As it is impossible difficult to foresee such impacts, it is best to not implement such a policy from the outset.

The Alliance also believes that any tacit approval of a 2% mandate is tantamount to supporting a larger mandate into the future.

We would also point out that a mandate will not provide an effective floor price as grain and molasses prices are determined by a variety of supply and demand fundamentals which have varying impacts.

Moreover, we would also argue that any production and investment benefit to grain growers will be offset by negative production and investment impacts upon beef, dairy, chicken, eggs and pork producers.

**33. What mechanisms if any should be put in place to avoid distorting the drought feeding market next time drought conditions persist in Queensland?**

The Alliance believes it is somewhat curious that the Queensland Government is interested in measures to mitigate the negative impacts of ethanol mandates when the root cause is easily resolved by not proceeding with such a policy. Any further Government intervention may potentially only aggravate the distortionary impacts and misallocation of resources from the mandate.

Government intervention always leads to unintended consequences and mandates have been criticized by numerous Government reports as having costs and risks that outweigh any purported benefit. The Alliance encourages the Queensland Government to read such reports and learn from such mistakes.

It is understood that the Queensland Government intends to introduce a clause in the mandate legislation which enables the mandate to be suspended should a natural disaster occur. This will not address our concerns as invariably the mandate will only be suspended after the impact on grain and molasses prices is felt. As with all Government intervention, legislation is a blunt instrument that lacks the nuances, timeliness and effectiveness of the normal market mechanism.

**34. What is the role of the Government in attracting a new bio-manufacturing industry in Queensland? Are there specific policy mechanisms or actions that will attract investment and development?**

The ethanol industry needs to become efficient in order to become commercially viable. Ironically, the best way to achieve this is to remove Government assistance and protection as 'infant industry' assistance invariably leads to complacency, inefficiency and incentives to continue 'rent seeking' lobbying behaviour to maintain such support rather than become competitive. The example of the Dalby bio-refinery going in and out of business proves that Government's should not provide such assistance for industries that are unable to be commercially viable without it. The Australian car manufacturing industry has also demonstrated that infant industry assistance is an abject failure.

Consumer demand for ethanol will only increase if it is discounted sufficiently to offset its inferior fuel economy and it is able to be used for all engines without any negative consequences.

**35. What additional actions can the Queensland Government take to increase the likelihood of project opportunities becoming operational projects?**

See answer to question 34.

**36. Development of the biofuel industry, specifically ethanol, has struggled from a lack of long term certainty and a problematic history. How do stakeholders including the Government provide the long-term certainty necessary for the development of, and investment in, bio-manufacturing?**

The policy that has provided the greatest form of Government assistance and protection to the ethanol sector has taken the form of the effective non-payment of the fuel excise (and the requirement for imported ethanol

producers to pay this as a customs duty). Given that this policy has been in place (under various Federal Government arrangements) since 1980, the Alliance disputes the premise that there has been a lack of long term policy certainty. Over this 35 year period the ethanol sector has received around \$1 billion in subsidies alone (the highest amount per litre of production in the world). Moreover, the sector has benefited from other state and federal Government programs including numerous ones related to consumer education.

Accordingly, the Alliance believes that the ethanol sector has had ample opportunity to grow, develop and become competitive. The fact that this has not occurred, should not be a matter for Government's to resolve in perpetuity. Accordingly, the Alliance does not believe that further Government assistance and protection is required.

Government instead should be implementing policies that encourage the development of superior second generation and advanced biofuels which are more cost-effective, environmentally beneficial whilst having greater energy output to input ratios than grain based ethanol production. They also mitigate 'food versus fuel' arguments.

Unfortunately, ethanol mandates perpetuate the disadvantages of current technologies and investment in superior technology is stymied.

### **37. What regional centres could become hubs for bio-refinery investment/development in Queensland?**

Brisbane. The use of municipal waste as a renewable energy source for ethanol production is actively encouraged given that such advanced biofuels are superior to biomass based alternate fuels from every perspective.

### **38. How could Queensland science support the development of the industry? How should it build on previous research (including the involvement of key end users)?**

See answer to question 36.

## **Conclusion**

In summary, the Alliance believes that:

- Increased Government assistance via a mandate for an industry that already receives more Government assistance per litre of biofuels produced than international counterparts is not the answer. Given that Government support and assistance policies have been in place for 35 years, a better solution would be to phase out such assistance and protection over time (as is occurring in the US and by the Federal Government)<sup>51</sup>;
- No industry should have a Government imposed demand for its product, particularly when consumers don't want it, mandates increase food and fuel prices and the policy costs will likely outweigh any purported benefit;
- Competitive industries should not be forced to incur higher costs on behalf of an ethanol sector which is both uneconomic and uncompetitive (and likely to remain so whilst ever supported by Government);
- The Qld ethanol mandate will provide significant benefits to only two ethanol producers in the state yet will negatively impact upon millions of food and fuel purchasing consumers, livestock producers and tax payers.

Accordingly, the Alliance believes that the Qld Government should not proceed with the mandate as proposed (even at small percentages).

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<sup>51</sup> International Institute of Sustainable Development – 'Biofuels – at what cost?' 2008