

## **Overview**

Mobil Oil Australia Pty Ltd (Mobil) is pleased to provide the following comments to the Queensland Department of Energy and Water Supply on the discussion paper "*Towards a clean energy economy: achieving a biofuel mandate for Queensland*".

Mobil is an affiliate of Exxon Mobil Corporation (ExxonMobil), and is a major refiner and marketer of petroleum products in Australia. Mobil and predecessor companies have marketed petroleum products in Australia for 120 years, commencing operations in Melbourne in 1895.

Mobil is a member of the Australian Institute of Petroleum (AIP) and fully endorses the response to the consultation paper submitted by the AIP. In addition we would like to make the following comments:

### **Mobil Operations**

Mobil has a long and proud tradition of reliable supply of high quality petroleum products to its customers in Queensland and throughout Australia. Mobil is a wholesaler of fuel, and does not own or operate a retail network. We supply fuel to commercial, industrial and reseller customers across Queensland. We are a joint venture partner in the Whinstanes Fuel Terminal in Brisbane, which is operated on our behalf by BP Australia.

Mobil is committed to competitive, free markets as the best mechanism to deliver cost effective and reliable supply of fuel. Mobil believes that biofuels stand the best chance of achieving a viable, long term role in Australia's fuel mix if it is left to the market to determine how and where they are best used. Governments' role should be to ensure a level playing field for all fuels including equal access to imports, maximising flexibility while ensuring that community and environmental needs are satisfied.

ExxonMobil has substantial experience in the blending and marketing of biofuels and is one of the largest suppliers of ethanol blended petrol in the US, where the use of renewable fuels is mandated.

### **ExxonMobil's Current Use of Biofuels**

Globally ExxonMobil markets biofuels in a number of countries and is one of the largest suppliers of ethanol blended petrol in the US. ExxonMobil will consider marketing biofuels where it is commercially viable and sustainable and provided that consumers are willing to buy the product.

In Australia, Mobil currently supplies ethanol blend petrol (10% ethanol or E10) in Queensland, Victoria, and in NSW where ethanol supply is mandated. We also supply biodiesel to customers in NSW. Mobil maintains regular contact with current and prospective producers of biofuels and continues to be open to any commercial opportunities to market such fuels, whether in Queensland, or elsewhere around the country.

### **Environmental Considerations**

There are a number of environmental aspects to consider in the use of both ethanol and biodiesel.

While biofuels use can contribute to reducing greenhouse gas emissions the benefits are reduced by the energy required to produce and transport the biofuels to where they can be used.

On a "Well to Wheels" basis, greenhouse gas (GHG) emissions from the production and use of biofuels may be as much as 30-50% lower (depending on how the biofuels are produced) than GHG emissions from the production and use of conventional petrol and diesel. This is based on using current agricultural land, natural gas-based power generation, and use of modern farming practices and productive land. Under other conditions, the benefits could be much less. Moreover, the cost of achieving such a reduction (in \$/ton of GHG avoided) is high relative to options for improving vehicle fuel efficiency or options in the power generation sector (e.g. co-feeding biomass to boilers, switching from coal to natural gas).

Other environmental aspects of the production of biofuels which need to be taken into account include the use of water and fertiliser to grow the crops from which the biofuels are made as well as the need to carefully prioritise the allocation of Australia's limited arable land for the production of transport fuel rather than food.

It is also important to recognize that increased demand on crops due to displacement of food production to grow biofuels crops can cause indirect land use change (ILUC) GHG emissions. For example, European studies have concluded that although little palm oil is used directly for biodiesel, it replaces the rapeseed oil diverted to biodiesel from food<sup>1</sup> and that ILUC effects negate the GHG savings of many first generation biofuels.

ExxonMobil supports research and development of next generation biofuels from wood or fibrous matter which have the potential for greater and more cost effective energy production and greenhouse gas reductions.

Whilst it is common to see motor vehicle pollution reduction claims made in association with biofuels, the actual air quality benefits may not be so definitive.

Engine technology and conventional fuel quality in Australia have continued to improve substantially and exhaust emissions from modern motor vehicles are now significantly lower, limiting any potential benefits obtainable from the use of biofuels. Brisbane's CO, NO<sub>x</sub>, and ground ozone levels are currently well within National Environment Protection Measures (NEPM) guidelines<sup>2</sup> and ongoing improvements in vehicle emission standards will further improve these air quality parameters. Directionally, ethanol blends increase NO<sub>x</sub> emissions and acetaldehyde air toxics.

Further, blending ethanol with petrol increases the volatility of the blend, and evaporative emissions from petrol containing ethanol will increase throughout the storage and distribution system. Reducing the base petrol volatility would offset these impacts, but substantially increase the cost of supplying the base fuel. Moreover, data from US studies<sup>3</sup> indicate that evaporative losses via ethanol "permeation" from vehicle fuel systems can further increase emissions.

### **Government mandates**

State Governments should ensure that there is appropriate, balanced consideration of environmental, regional development and consumer interests in formulating their policies on biofuels.

Mobil supports the concept that the open market should be relied upon to determine if biofuels are viable. Direct or indirect mandates for the use of biofuels are likely to result in the development of projects which are not internationally competitive without continued favourable excise treatment and other support. Taxpayers and consumers

would then be left with the burden of propping up uncompetitive producers indefinitely.

The biofuels industry has already benefited from substantial Federal Government support, ultimately paid for by taxpayers. With the assistance it has already been given, the biofuels industry should now be prepared to compete with other fuels on a level playing field, without mandates or further government subsidies.

The policy benefits cited in the issues paper have not been rigorously tested, and it is therefore important that a comprehensive assessment is undertaken via a Regulation Impact Statement (RIS).

### **Setting the compliance point – lessons from NSW**

NSW introduced a biofuels mandate in 2007, requiring “volume sellers” including Mobil, to sell a legislated percentage of ethanol and biodiesel into the NSW market. The mandate was originally set with the express intention of removing Regular ULP from the market, which determined the form of the mandate – i.e. it was not necessary to regulate smaller retailers, who would have no choice but to supply E10. Although the decision to remove RULP was later reversed, the form of the mandate was not changed –which meant that compliance was focused on the wrong end of the supply chain. The wholesaler cannot influence a retail customer’s decision to buy a particular fuel grade, and it is illogical to hold them accountable for an outcome over which they have no control.

Mobil strongly advocates against the replication of the NSW model in Queensland. The NSW mandate is inefficient, onerous and expensive for industry, and, despite major investments by industry in supply infrastructure, it has been largely unsuccessful because it is not driven by market forces.

In 2010, Mobil sold its retail network to 7-Eleven, and since that time, Mobil has no direct engagement with the end consumer. As a wholesaler we have no ability to compel customers to increase their purchases of biofuels, and our scope to increase sales is very limited.

### ***Is the class of retailer appropriate? (Q1)***

In our view the regulatory mechanism most likely to be effective in increasing E10 sales (short of the Government requiring that all petrol contain ethanol) would be to implement a mandate at the point closest to the consumer – that is, at the retail rather than the wholesale level. This would most logically be a mandate to make an ethanol blend available rather than a specific volumetric target. From a compliance perspective, it is not fair or logical to hold a wholesaler responsible for an outcome it has little or no influence over – using supply levers to achieve a demand-driven objective.

### **Consumer Issues**

Customer acceptance is a major area of concern for biofuels, particularly for ethanol.

Whilst others are better situated to comment from a Retail perspective, we note that the NSW market has seen a significant increase in Premium fuel sales since the ethanol mandate was introduced, as customers “vote with their feet” at service stations and purchase PULP in preference to E10 – despite a significant price difference.

Additionally, automotive and small appliance manufacturers do not endorse the use of ethanol blend fuels in some of their models. According to the Federal Chamber of Automotive Industries (FCAI) website (<http://www.fcai.com.au>), there are a significant number of motor vehicle models that are not suitable to use E10 and this includes most motor bikes. The Japanese motorbike manufacturers Honda, Kawasaki, Suzuki and Yamaha do not recommend the use of any ethanol in any of their models. Therefore, there is a continuing need for clear labeling and communication to such consumers as well as the availability of choice of fuel.

Similarly Biodiesel raises warranty concerns for some commercial/industrial users, e.g. where Engine Manufacturers require shorter service periods if biodiesel is used. Product quality/performance concerns are also an issue for some customers – particularly where the fuel might sit in tanks for an extended period (such as emergency backup generators).

### **Design features and implementation considerations**

*Is a 2% mandate appropriate? (Q3). What level of escalation would be achievable? (Q4) What timeframe would stakeholders need to prepare for and meet this requirement? (Q6)*

Enforcing compliance with a volumetric mandate is an inefficient, expensive and – as the NSW experience has shown – ineffective way of achieving the stated policy objectives. Compliance should be determined by whether an individual retail site has an ethanol blend available for sale and not by a volumetric requirement. The policy objectives can then be supported by a demand-focused marketing campaign, to drive increased demand at the consumer end.

A Government target of 2 percent of ethanol sales as a percentage of total ULP would be difficult to achieve within the stated timeframe (July 1 2016). In setting forward targets, the Government should consider supply/infrastructure investments required on the supply side, and implement marketing and information campaigns to drive customer acceptance. Over time, it could be expected that consumer demand will increase, incentivising ongoing investment in new production, infrastructure and supply.

### **Supply considerations**

A mandate to supply increased volumes of biofuels in Queensland would add significant cost to the supply chain. These costs include not only the establishment of new dedicated ethanol distribution and blending infrastructure but also the increased trucking of biofuels to key fuel distribution facilities versus incremental pipeline/ship movement.

Mobil does not operate any bulk fuels terminals in Queensland. In Brisbane, we lift out of Whinstanes Terminal which is a Joint Venture terminal operated by BP, which has ethanol blending capability. North of Brisbane, Mobil does not own any terminals. We have contractual agreements with others at Gladstone, Mackay, Townsville and Cairns to use their terminal facilities. Of these terminals only BP Mackay has ethanol storage and blending facilities. Mobil would be reliant on the terminal owners to invest in ethanol blending facilities to enable the sales of ethanol blended products in these locations. We expect this work would take at least 12-18 months.

There are a limited number of ethanol suppliers in Australia, which raises concerns about the vulnerability of supply, particularly given historical experience of disruptions to raw material supply due to floods and droughts. Recently introduced excise changes effectively rule out imports of biofuels as an effective alternative in the

Australian market. If local producers are running close to capacity to meet increasing demand, it leaves little flexibility in case of a product quality issue or plant upset.

### **Biodiesel**

From an industry viewpoint, a biodiesel mandate is not achievable at this point in time. There is simply not enough local biodiesel production. Queensland diesel sales in 2014 were 6,400ML. Two percent of sales represents 128ML of biodiesel - current biodiesel production is 30ML p.a. So until further investment is announced, and new capacity is online, a biodiesel mandate cannot be considered.

Mobil does not have access to any biodiesel blending facilities in Queensland, including at Whinstanes Terminal. We estimate that the installation of biodiesel blending facilities would cost in the range of \$3-5 million, and would take a minimum of 18 months to design and construct.

### **Sustainability issues**

There is currently no clear and accepted framework for determining or assessing sustainability criteria, nor for measurement and compliance regimes.

If the requirements are not consistent with those used in NSW it makes it difficult to manage cross border deliveries (both ways). Sustainability is an issue for the biofuels producer, and it should not be an expectation that the fuel wholesaler needs to prove whether a biofuel stock supplier is compliant with the regulations instead it should be a requirement that the biofuel supplier must prove sustainability and have same verified by the State government (e.g. listed as an accredited sustainable supplier).

Government needs to manage sustainable biofuel accreditation and ongoing, of all potential biofuels manufacturers and importers to the Australian fuel industry.

### **Conclusion**

In summary, Mobil would like to reiterate the following points:

- Mobil does not support a Biofuels mandate on the basis that it is inefficient, onerous and expensive for industry, does not reflect customer demand, and delivers limited environmental benefits.
- A mandate would require major investments by industry in supply infrastructure, not supported by normal commercial imperatives.
- Queensland should not repeat the mistakes made in NSW by replicating their mandate model.
- In the event that a mandate is introduced, it should be applied broadly and equitably to all market participants, at the point in the supply chain closest to the end consumer –that is, the retail outlet.
- While the Government may choose to set and monitor a biofuels target as a percentage of total sales, it should not set a fixed volumetric target for compliance purposes but focus on a requirement to have product available for sale.
- A July 1 2016 start date will be a stretch from a supply perspective, with at least 18 months required to implement supply chain changes once new regulation has been passed.
- A biodiesel mandate cannot be implemented until the capacity of local biodiesel production can support mandate compliance
- Industry consultation at every step is essential to prevent unintended cost and consequences.

**References:**

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<sup>1</sup> JRC 2014 "Presentation of the study The impact of biofuels on the different transport modes and their connection to the agricultural development in Europe"

<sup>2</sup> "Queensland air monitoring report 2012, National Environment Protection (Ambient Air Quality) Measure", Queensland Department of Science, Information Technology, Innovation and the Arts

<sup>3</sup> CRC Report E-77-2c, "Study to Determine Evaporative Emission Breakdown, Including Permeation Effects and Diurnal Emissions, Using E20 Fuels on Aging Enhanced Evaporative Emissions Certified Vehicles," as well as the data from the study, are available on the CRC website at: <http://www.crao.org>