

Submission on Australia's Future Fuel and Energy Needs

**from Mr Patrick J Byrne
Vice President National Civic Council
Sugar Industry Reform Committee**

To the Committee Secretary,
Senate Select Committee on Fuel and Energy,
Department of the Senate,
PO Box 6100, Parliament House, Canberra ACT 2600. Australia.
Phone: 02 6277 3437 Fax: 02 6277 3899 Email: fuelenergy.sen@aph.gov.au

In his "Energy: the state of the nation" speech on March 18, the Federal Energy Minister, Martin Ferguson said:

"Australia could face a trade deficit in petroleum products of more than \$25 billion by 2015 and domestic oil production could be as little as 20 per cent of our needs compared with 80 per cent in the 1990s."

This is similar to the forecast of Belinda Robinson, (Australian Petroleum Production and Exploration Association, "Energy state of the nation", March 7, 2007):

"Using Geoscience Australia projections and assuming oil prices of US \$50 a barrel, ... the deficit for oil, condensate and refined products is projected to increase to \$27 billion a year by 2015 -- around twice the 2005-06 deficit of \$12.8 billion."

These figures appear to be based on oil priced at about US\$50 a barrel and the Australian dollar at about US\$0.80.

When Mr Ferguson spoke to the press on this occasion he said that it was absolutely imperative that Australia find more oil. His tone of voice suggested that Australia was facing a potential oil crisis.

This may well be the case given that (a) following the commodities boom, the Australian dollar is likely to fall dramatically; and (b) the rising demand for oil from the rapidly expanding new economic powers of China and India will mean that if the huge increase in demand for oil cannot be matched by expanded world supply, then the price oil will be much higher than over the past thirty years, and potential conflicts over oil could see Australia struggling to source oil supplies overseas.

(a) After the commodities boom

Prime Minister Rudd has warned that Australia faces "waking up with the mother of all hangovers" in its failure to address "a multitude of economic weaknesses" hidden by the mining boom.¹

The Australian dollar oscillates with commodity prices. When the commodities boom subsides, then the Australian dollar is set to fall dramatically. At its last low several year ago, it fell below US 50¢. This time, with the foreign debt putting a higher risk factor on Australia, the dollar could well fall below US 40¢.

A low dollar could dramatically force up the cost of oil imports.

(b) World competition for oil

The world is facing a future where not only will the developed nations of the EU and US be increasingly reliant of imported oil, but the rapidly expanding states of China, India and East Asia will be heavily dependent on imported oil.

A 2005 **European Union** Green Paper² on energy stated that:

¹ *The Australian*, May 12, 2008

² "Geopolitics of EU energy supplies", July 18, 2005, *EurActive.com*

- By 2030, the EU's will have gone from 45% dependence on imported oil in 2000, to 90% dependence.
- Gas imports will have jumped from 40% to 80% over the same period.

Amy Myers Jaffe, an energy expert at Rice University, told a US Congressional hearing this year that in 1973 the **United States** imported 35% of its oil. Today it imports over 60%.³ The Gulf states account for 23% of US imports.⁴

Regarding **China**, Mikkal E. Herberg, of the National Bureau of Asian Research, in his submission to a US Committee on Foreign Relations hearing in 2005, said that China will be:

- 80 per cent dependent on Persian Gulf oil by 2030;
- a net importer of coal by 2015; and
- importing 40 per cent of its natural gas by 2025.

India imports 70% of its oil requirements today, and is likely to increase to 91% by 2020, with 45% coming from the Middle East.⁵

Australia is a small player among these economic giants. As the demand for oil imports grow among these economic powers, if world supplies cannot match demand, Australia may well struggle find oil to import.

It is likely that the price of oil will therefore be higher in the future than in the past.

What cost oil imports

Mr Ferguson's estimates of the cost of oil to Australia in 2015 appear to be based on oil priced at about US\$50 a barrel and the Australian dollar at about US\$0.80.

Consequently, using Ferguson's figures:

- if in 2015 the price of oil is in fact around \$US100 or \$US 150, and the Australian dollar is still at US\$0.80, then net oil imports will be \$50 bn or \$75 bn, up from about \$13 bn today.
- if in 2015 the price of oil is in fact around \$US100 or \$US 150, and the Australian dollar has dropped to about US\$0.40¢ after the tapering off of the commodities boom, then net oil imports will be \$100 bn or \$150 bn, up from about \$13 bn today.

<i>Net increase in the oil trade deficit:</i>	
<i>Oil at \$US100-150 bn, AUD at US\$0.80¢ ...</i>	<i>\$US37 bn to \$US62 bn</i>
<i>Oil at \$US100-150 bn, AUD at US\$0.40¢ ...</i>	<i>\$US87 bn to \$US137 bn</i>

³ "End to Middle East oil imports unlikely", *International Herald Tribune*, August 29, 2008.

⁴ "Brazil oilfinds may end reliance on Middle East," *Bloomberg.com*, April 23, 2008.

⁵ "Turkey offers oil pipeline to India," *Asia Times*, Feb 27, 2008.

Clearly, under these scenarios, the cost of importing oil will greatly blow out the Current Account Deficit and the foreign debt to levels that the international financial markets would find unacceptable.

The result would likely be a credit strike, a possible flight of capital, and a further collapse of the Australian dollar.

Unable to buy sufficient oil imports, Australia could face a substantial oil shortage and very high fuel prices.

Solutions

Solutions demand action now, as waiting seven years or so will only bring on an economic crisis.

1. Biofuels mandate (SEE ATTACHED BROCHURE)

It would prove very advantageous to Australia to become a major sugar cane-based ethanol producer, to supplement Australia's falling liquid energy reserves.

It has been argued that expanding ethanol production would force up food and feed stock prices. That may be the case overseas, but it is **not** the case for Australia. Sugar is a minor component in the price of food and food-stock for lot-fed animals.

The enclosed brochure has outlined the possibilities for Australia to produce ethanol for sugar cane.

Using the best-proven technology called the Dedini process, from Brazil, 1 tonne of sugar cane can produce 125.1 litres of ethanol. Therefore, just 42% of the Australian sugar crop could supply 10% ethanol in all Australian petrol driven cars. Yield of ethanol from sugar cane has been rising rapidly in recent decades, and a new process developed by an Australian scientist, although yet to be field tested in a mill, promises to produce even more ethanol than the Dedini process.

Further, the US and Brazil are investing hundreds of millions of dollars in developing cellulose ethanol, which aims to break down the complex fibre starches in plants (which are long, complex molecules made up from simpler sugar molecules) into simpler sugars to then allow ethanol to be produced both from the plants sugars and its fibrous materials.

Ethanol has environmental benefits. It is a clean fuel. It cuts particulate matter emissions and reduces pollution associated health costs. It recycles CO₂, meaning that a major ethanol industry could help cut the cost of a carbon emissions trading scheme.

Australia also has the advantage of vast untapped, fertile regions and vast untapped water in northern Australia. Bringing these resources into use over a decade or so would allow the expansion of a sugar cane-based and corn-based ethanol industry.

The basic Federal policies needed to establish this industry is:

An ethanol mandate: As a McKinsey's Consulting report has noted, "whether through subsidies, import tariffs, or research grants, government regulation has helped drive both

the demand and profitability in the industry.” (W. K. Caesar et al., “Betting on biofuels”, *The McKinsey Quarterly*, No 2, 2007).

Therefore:

(a) The Federal Government must mandate a minimum 5 per cent ethanol in all petrol and flex-fuel vehicle “variable mix” hoses on every fuel pump (5-85 per cent ethanol), to give consumers a choice not currently available.

(b) The mandate should be raised to 10 per cent over the next five years and the current fuel excise exemptions should be extended until a domestic industry is soundly established.

Arbitration between farmers and mills: In the face of a monopsony, voluntary collective bargaining has failed. Therefore a mandatory final-offer arbitration system must be reinstated to arbitrate on the price for sugar cane and all issues relating to supply agreements. This system must have a judge as arbitrator, advised by representatives of farmers, mills and a technical advisor nominated by the affected grower groups. The price for cane is to be based on actual prices achieved from the sale of all products derived from sugar cane. This policy can be achieved by direct federal legislation, or by an industry mandatory code of conduct.

Incentives for ethanol mills to be established: Consolidate the above policies by providing financial incentives for farmers to build new mills. The Brazilian government is providing soft loans up to 80% of the value of an ethanol mill.

2. Expanding oil exploration:

It is vital to expand oil exploration, but it is unlikely to yield another Bass Strait sized find, which is what would be needed to overcome dwindling supplies.

3. Gas

Australia needs to expand the use of its huge gas deposits for transport fuel.

Conclusion

Australia will be battling to import oil in the future as major global economic and geo-political power shifts take place. As Australia’s oil reserves run down and as the price of oil is likely to remain higher than in the past, Australia may not be able to afford oil imports to satisfy its needs.

A vital part of the solution will be the establishment of a major bio-fuels industry in Australia.