

Submission to Senate Inquiry – Future Oil Supply

This submission addresses the terms of reference a, b, c and d.

- a. It is clear from available literature that the world supply of oil is finite, that the demand will outstrip supply sometime between now and about 2015, that oil prices will rise substantially (several orders of magnitude) in the following decades. It is also clear that gas is in a similar state, but around 20 years later than oil.
- b. Australia has limited supplies of oil, substantial supplies of gas, and huge supplies of coal and uranium. Clearly there are environmental problems with coal, and enviro-political problems with uranium/nuclear alternatives. Some impacts on transport are obvious:
 - oil (petrol and diesel) are the transport fuel sources for most modes;
 - it will take at least a decade, more likely two decades, to change transport fleets and distribution infrastructure to change;
 - the change will be easiest to gas because we have already started, but to get major penetration will still take many years;
 - the change to other sources (such as all electric using coal/nuclear power to generate via the grid) will take much longer;
 - hydrogen is not a 'source' of energy, it is a transmitter of energy, so it cannot be counted as an energy source and, in any case has major distribution problems even if it was produced in the very large quantities needed for transport
- c. The following may be expected:-
 - air transport will become very vulnerable because gas/coal/nuclear are not good alternatives for aircraft.
 - Car and truck transport will get more expensive, as will diesel powered public transport.
 - This will lead to cars getting smaller and more fuel efficient, and trucks getting bigger and more fuel efficient.
 - For freight distribution this is likely to lead to less 'just in time delivery' and more on site warehousing/storage by trucks making less but larger deliveries. There will be a move away from trucks towards more energy efficient railways, but the scope for this is very limited because of the myriad origins and destinations which are not practical or energy effective to serve by rail.
 - Information technology needs to get much better at grouping freight loads for common pickup/delivery/truck utilisation. Privatisation could be a hindrance in the common pooling of freight customers needs.

- Walking and cycling will become more popular, not only because they will become relatively less expensive, but also as governments and the community become more aware of the health benefits of exercise.
- d. Options for improving Australia's situation are basically good because:-
- We have large fuel reserves we have a strategic advantage compared to many countries – we should commence to utilise that advantage
 - We have the opportunity to move towards economising on present 'fuel guzzling' transport modes (eg 4WDs for city driving) by sending the right price signals
 - We are world leaders in direct marketing (TravelSmart) to influence people's choices towards more sustainable transport

But these strategic advantages are currently being hampered by a national Government which currently refuses to recognise that a problem is looming, is arguably unduly influenced by the air polluting industries (eg coal), and that we have the potential to take long term advantage of this.

There are two strategic decisions we need to make. The first is obvious: start on the 'no regrets' (actually few regrets) path of greater fuel efficiency, moving to less polluting fuels such as solar, wind, gas in the interim (say 10 to 15 years). The second is a much more difficult decision; do we use coal or nuclear as long term energy sources? It is clear that, on present expectations, benign alternatives such as solar and ethanol cannot make up more than about 20% of the need, so we must get working on where the other 80% will come from in 20 years or so years because this lead time will rapidly disappear.

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