

Senate Regional Affairs & Transport Committee

Inquiry into Australia's future oil supply and alternative transport fuels

Response by Greg Smith

Terms of reference

a. Projections of oil production and demand in Australia and globally and implications for availability and pricing of transport fuel in Australia.

It is clear that at some point in the near future that world is going to run out of the finite resource oil. Although we are not entirely sure at what point the world will be depleted of cheap and easily extractible oil, it is imperative that while we have the time, be in the process of developing strategies to meet future transport energy requirements. Although not agreed entirely agreed upon when we will run out of oil I suggest long term alternative fuel replacement plan will have to be implemented well before traditional supplies are depleted, ideally before we have used half of the world's finite oil resources. This suggestion is made for the following reasons:

- A great deal of time needed to develop viable alternatives
- Increasing global demand for oil
- Unknown extent of domestic economic and civil disruptions

Global demand for oil is increasingly at an alarming rate, it is being primed by wealth created in past under developed countries such as China, India and the region of SE Asia will continue to do so for years to come. Australia needs to accept that this is one of many reasons for increasing pressure on our own oil demands. As we move into the future, past unlimited access to petrol and other oil based products may not necessarily be taken as for a given.

The replacement of the cheap and easy fuel of petroleum will be no means simple that is why I personally believe the federal government should be putting significant resources in the development of a *National Fuel Strategy* which is integrated between all three levels of government. Although economic theory states that this transition will be determine by market forces, how population adapt to such changes in oil supply/price are in reality chaotic and destructive to the entire economy. As demonstrated in the oil crisis in the 1970's populations responses to finite fuel supplies were less than rational.

Former United States President, Bill Clinton urges governments across the world to address 'the end of the age of oil' with the same amount vigilance as resolving the current global problems associated with terrorism. A *National Fuel Strategy* backed by such extensive resources will allow Australia to beyond the 'chicken and the egg' scenario in the development of viable alternative transport fuels. Integrating the manufacturer transport technology with usable alternative fuel structures could support specific transport markets, thus intern provide the catalysis which is needed to resolve the problem of oil depletion. This will be by no means easy however, government direction leadership and support is crucial to the overall success of adapting to the changing nature of transport fuel markets and long term economic stability of Australia.

B. Potential of new sources of oil and alternative transport fuels to meet significant share of Australia's fuel demands, technological developments and environment and economic costs.

The best approach in successfully implementing alternative fuels and increasing oil supplies is to assist in the gradual improvement of current technologies via conservative measures (Goodstein, 2005). Continued local exploration could help to ease the situation, however, it is widely accepted by exploratory societies in Australia that domestic supplies of oil will be greatly less compared to the past, and we will have to become more dependant upon politically unstable supplies such as the one in the Middle East. As we enter the next ten year period our domestic oil supplies will be limited at best and thus why I believe that the majority of Australia resources should largely revolve around developing viable Alternative Transport Fuels within specific markets. Based on my own assessment of technological, environment and economic costs I suggest that Australia should consider the following strategic focus:

- Developing and assisting the widespread use of Compressed Natural Gas (CNG) within the Heavy Vehicle & Public Transport Sector. This includes trucks, buses and trains.
- Developing of a range of viable bio-fuel alternatives for diesel vehicles which are used in Regional and Urban Australia.

It is clear that the efficient use of finite government resources to implement necessary change should be used on well developed technologies and not on those currently requiring the use of more traditional oil supplies to create what appears to be a transport fuel alternative. For example, the growing of some crops for ethanol often uses more petrol (oil based product) in order to make the product available to the market place thus a negative energy producer. Although there are no simple answer, the use of existing research and the creation of 'transport priorities' in Australia may prove to be central in meeting Australia future transport demands. The above example could also relate to the use of hydrogen as a fuel alternative. Unfortunately current technology associated with fuel alternative like hydrogen are very costly and often cause more environmental harm because of the associated energy requirements needed to produce and distribute the fuel.

The reason why I suggest Compress Natural Gas (CNG) as a viable alternative fuel priority in Australia, although it is not a renewable resource we do have extensive supplies to meet local transport need. Also local research on implementing this transport fuel alternative within the public transport and heavy vehicle sectors is widely available in Australia. Many local governments have garbage collection services with run on straight CNG and in Adelaide, South Australia for many years they have a large fleet of buses which on straight CNG. Also in the 1990's New Zealand had the largest CNG vehicle fleet in the world until economic policy killed the industry. Even so this is another extensive local resource which is available to us. CNG is a relatively simple technology with basically utilities a slight variation of current internal combustion designs. On the other hand CNG is also quite evolutionary, more advance forms of the technology such as injection methods could well be applied to hydrogen and hybrid electric technology. This could prove central in resolving current technological limitation associated with hydrogen.

Personally I am not keen on putting extensive resources in some alternative fuels and oil derivative (e.g. shale oil). Not only do they prove to be highly cost prohibitive but oil substitutes do not do anything to address the issue of global warming. Developing focus within specific transport sector and transport fuels is the key in resolving this complex problem of economic, social and environmental imperatives.

Allowing new industries to develop within specific regional clusters should be a key consideration of a proposed *National Fuel Strategy*. Local Government specific knowledge of their own regional strengths could be central in developing successful alternatives. Alternative could be more largely base on local enthusiasm and support from local business. Adopting the development of the Prime Minister model on community business partnerships in my opinion would be an integral part of the success of a *National Fuel Strategy*. It has to be recognized what work for some regions will not work for others. For example a regional community might find it suitable to grow canola crops to produce bio-fuels where as a urban region might deem it to be more useful to recycle waste plastic into a form of bio-diesel. Accessing regional advantages is central in obtaining the necessary energy efficiencies to required to make possible fuel alternative successful on all three economic, environmental and social levels.

C. Flow on economic and social impacts from continuing rises in price of transport fuel and potential reduction of oil supplies.

Although I have been involved in many different community programs at this point in time I do not feel that I am in a situation to comment on how to deal with the social impacts of fuel price rises. However, I believe education and community empowerment is the key on how local communities can deal with rises in economic costs. Significant resources should be allocated in developing education processes which empowers local communities to come up with effective travel demand contingency plans.

I do not believe any monetary policy changes to petrol should be made to decrease the cost of petrol. This is a short term solution, associated cost savings will be absorbed by associated market forces in the long term. Economic incentive should be focused upon creating fuel alternatives.

D. Options for reducing transport demand

I could write a book on this topic however, I am sure many of the points that I would raised have already been discussed by yourself and many other associated bodies involved in this democratic process. The following topic areas should be considered:

- Private and public transport options
- Programs which aim to reduce economic cost of transport (e.g. car pooling and using bicycles)
- Impact upon isolated and urban fringe dwelling communities
- Better cities program and this can assist in changing existing urban infrastructure environmental limitations

Thank you in advance for reading my submission, look forward to attending the public meeting.

Yours Sincerely

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