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Committee Secretary
Senate Rural and Regional Affairs and Transport Committee
Parliament House
CANBERRA ACT 2600

Dear Sir

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

Public Submission

Thank you for inviting submissions. I work as a transport planner in Western Australia. This submission is my own personal view.

I have heard and read expertly presented facts and opinion on the subject of peak oil and the future of petroleum supply for transport fuels and many other purposes. I have developed the view set out in my detailed submission and summarised below.

- The world is approaching its peak oil production and this will be followed by a decline.
- New sources of oil and alternative transport fuels are unlikely to adequately compensate for declining oil production.
- Australians' dependence upon motorised transport means that the economic and social impacts of oil shortage or price escalation will be severe. Some people are more vulnerable than others.
- Options to reduce Australia's future transport fuel demands is the most important and the most difficult aspect of this enquiry. The most important actions for the government to take are:
    - Identify and change all perverse policies that encourage greater consumption of transport fuel.
    - Change funding priorities away from road expansions and towards transport modes that use fuel efficiently.

I encourage the Committee to avoid a lengthy debate on whether Australia is facing a transport fuel crisis, and simply accept that there is a significant risk. This will allow the Government and the community to proceed with the work of acting on policies that assist us to survive and prosper in a world of declining oil production.

Yours faithfully

Alan Kleidon
24 January 2006

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

Detailed Submission by Alan Kleidon

a. Projections of oil production and demand in Australia and globally and the implications for availability and pricing of Transport fuels in Australia

I understand that the United States passing its Hubert peak in the early 1970s was the underlying cause of the 1970s oil crisis. Australians were relatively insulated from the full impact of the 1970s oil crisis because of domestic production. I have read that Australia has now passed its Hubert peak and our demand for conventional liquid fuel is well above domestic production. I understand that petroleum experts believe that we are rapidly approaching a global Hubert peak and then decline in liquid petroleum production.

There is no value in debating whether we are approaching a fuel supply crisis. I urge the Committee to accept that domestic and worldwide liquid fuel shortage is a significant short term risk. This will allow the Committee's and the Community's efforts to focus on necessary or prudent steps to:

- mitigate against the risk of fuel shortage;
- prepare to manage escalating fuel prices; and
- prepare to manage fuel shortage when it eventuates.

b. Potential of new sources of oil and alternative transport fuels to meet a significant share of Australia's fuel demands taking into account technological developments and environmental and economic costs.

The lesson of the Hubert peak is that after oil production reaches a maximum, it will decline. New oil discoveries are never sufficient to stop this decline. Seeking new sources of oil offers no real protection from declining national or global production.

I am aware that people have been searching for a replacement for oil for a number of years. While LP gas and natural gas appear to offer some hope, they are widely recognised as transition fuels only. One would also expect that in an environment of fuel shortage, available gas production capacity would be consumed and gas would be subject to the same price pressure as liquid fuels. In addition, gas is still a fossil fuel that produces greenhouse gas and is subject to depletion.

We have heard much about the options of alcohol and bio-diesel fuels. These may be technically feasible. However, the quantity of agricultural production needed to meet our present fuel demand would be so large that Australia could not feed its population.

The current favoured alternative transport fuel appears to be Hydrogen. Hydrogen is not an energy source, but an energy carrier. I understand that for current experiments including the fuel cell buses in Perth, the hydrogen is produced from oil. Hydrogen fuel requires an energy source. Demand for Hydrogen would increase the competition and the price for whatever energy source is used to produce it. It is also very possible that production of hydrogen from an energy source such as coal would increase the atmospheric pollution created by our transport activity.

I would definitely vote against any candidate or party to entertain nuclear energy options. It is an unacceptable risk and experts doubt its real value in producing net energy.

Some of the transport fuels discussed above may serve a useful function. My view is that none of them will replace the abundant, cheap and convenient transport energy that petroleum based fuel has given. I ask that the Committee adopt a view that all available energy sources need to be managed frugally.

c. Flow-on economic and social impacts in Australia from continuing rises in the price of transport fuel and potential reduction in oil supply.

Australians appear to be particularly vulnerable to shortage or price escalation of fuel for the following reasons:

- Cities such as Perth have amongst the highest per person transport fuel consumption in the world.
- Much of Australia's public infrastructure was built during a time of cheap oil and its operation assumes availability and cheapness of transport fuel.
- Australians have large private investment in assets that rely on cheap, available transport fuel. These include:
    - our car fleet;
    - our homes that are often remote from our employment and the services we use;
    - our business premises; and
    - our commercial transport fleet servicing homes and businesses.

  One would expect scarcity and expense of transport fuel to erode the value of these investments. This erosion would be most severe in areas most reliant on private motorised transport.
- A significant number of Australians live in rural or remote areas. These people appear to have little alternative but to use private motorised transport.
- Many of the goods and services that we use in our daily lives have a significant transport input. One would expect a sustained escalation in transport fuel cost to cause an escalation in the cost of groceries at every shopping centre in Australia.
- In Australia we have become dependent on consuming large amounts of energy from a range of sources. As oil for transport fuel becomes scarce and expensive, increased competition for all energy sources may escalate all energy prices.
- It appears that some people will feel the impact of fuel shortage or cost escalation more immediately, and more severely than others. The first and most severe impacts may fall upon those most reliant on transport fuel and those whose budget is already tight. Outer urban and rural residents would be the first to suffer.

In a post Hubert peak world, one might expect a rapid and sustained increase in transport fuel cost. In the absence of abundant and well developed alternative energy sources, a global liquid fuel shortage may force us to adjust our lives to cope with more scarce and costly transport fuel in a short timeframe. This situation would be beyond the control of any government, business, or community. It would cause pain and disruption to Australians that goes well beyond paying more for petrol.

d. Options for reducing Australia's transport fuel demands

This area is the most difficult to adequately address, and is the most important. For Australians to survive and prosper in either a short term scenario of escalating oil price or a long term scenario of limited alternative fuels, we must learn to use transport energy efficiently and to curtail our demand.

I ask that the Government lead by example in curtailing its transport fuel demand. As the Government replaces its own vehicle fleet, it should seek to both minimise the fleet and make it as fuel efficient as possible. The Government may also review its own operations with a view to minimising the energy consumption of its vehicle fleet and its total operations.

The Government must send rational signals to the community to allow us to make equally rational decisions.

- I could live with the Government raising tax rates on transport fuels. This would achieve the following:
    - It would make us think how to be frugal with energy resources as we make our decisions in respect of daily travel, vehicle selection housing location and more.
    - It would positively reward people who choose wisely to be frugal with transport energy.
    - It builds robustness to escalating world oil prices, and in extreme circumstances, it allows the Government to ease taxes to soften the effect of world oil price shocks.
- The Government must identify and redress perverse policy that may encourage increased consumption of transport fuel.
    - Fringe benefits tax (FBT) on cars becomes less as the number of kilometres travelled increases. This can mean that a person or business may save money by burning extra transport fuel. I would prefer a flat rate of FBT on cars or that the FBT rate increase as the number of kilometres travelled increases.
    - I would like to see taxes on new vehicles that give an incentive to purchasing an efficient vehicle. The tax I pay on a Corolla or Prius should be substantially lower than a large four wheel drive.

As we approach a world of scarce and expensive transport fuels, I would like to see the Government changing its capital funding priorities for transport infrastructure. Within a few years, rising transport fuel costs might change our road traffic trend from growth to decline. This possibility would make today's investments in road infrastructure unwise. I would like the Government to immediately reduce its funding of road infrastructure and invest in transport infrastructure that uses fuel efficiently. This includes:

- Bicycle transport facilities.
- Railways (where the transport task is sufficient for the rail to be more fuel efficient than road.)
- Public transport facilities including vehicles and infrastructure both on road and in dedicated rights of way.
- Intercity rail and bus facilities.

The Government of Western Australia runs the “Travel Smart” program. This is a program of directly marketing sustainable transport modes. I understand that it achieves large benefits at small cost. Similar programs could be funded in many locations.

The Government might consider artificially slowing oil and gas extraction rates in Australia. While this may be difficult to achieve, the benefit of Australia retaining oil and gas reserves would be valuable in a post Hubert peak world.

In an extreme scenario, I could accept a system of rationing fuel on a per person basis. Such a system would need to allocate enough fuel for people to live in their own circumstances but would need to penalise people who are wasteful. I could even accept the option of fuel ration entitlements becoming tradeable commodities. It may be prudent to draft enabling legislation in advance of a crisis.

Conclusion

I believe that the world is approaching its peak in oil production followed by a decline. In Australia, we are exposed to severe impacts because of our dependence on transport fuels and declining domestic production.

While new sources of oil and alternative transport fuels may be important, they are unlikely to compensate for declining oil production.

Australians’ dependence upon motorised transport means that the economic and social impacts of oil decline could be severe. Scarcity and rising cost of fuel is likely to impact many aspects of our lives. The impact of rising fuel cost is unlikely to be evenly distributed. Some people are far more vulnerable than others. Detailed work is needed to identify the full extent of the impact that shortage or rising cost of transport fuel will have on Australians.

Options to reduce Australia’s future transport fuel demands are the most important aspect of this enquiry. It is also the most difficult. It is clear that the government’s funding priority must place less importance on roads and direct priority to the most fuel efficient modes and demand management.