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The Secretary  
Senate Rural and Regional Affairs and Transport  
Parliament House  
Canberra ACT 2600

Dear Sir/Madam,

## **Reducing our reliance on Imported Oil Products.**

**By Dr Jeremy Wilkinson**

### **SOME BACKGROUND**

“Oil vulnerability”, the susceptibility to the disruption of services and activities by the interruption of oil supplies is a global issue.

In Australia around 98-99% of all of our transportation by air, sea and rail is dependent on oil as the driving fuel.

On a global scale our population is small, but per capita we are heavy users of oil products. Our mining and agricultural systems are the back-bone of the Australian economy and rely on cheap oil to keep operations functioning.

We have followed the American model of creating dispersed sub-urban residential environments (Dodson and Sipe, 2005) that are poorly served by electrified public transport, and more importantly we have persisted as a society with our obsession with heavy automobiles with large engines that suck-up 10-15 litres of fuel for every 100 km travelled. Since we are so dispersed in our metropolitan centres our reliance on personal car transport to shop for food, take the kids to school and commute to work, has resulted in a society where people rarely walk or cycle, where obesity is ever on the increase and childhood asthma rates are amongst the highest in the world.

Our desire to drive has both local and global consequences and in a time when there is a huge body of information that shows us that what we are doing is rapidly altering the climate of the planet, global ice is melting rapidly, sea-levels are rising, the temperature is going-up and the extremes of weather are exceeded year-on-year.

What is driving this?

Simply, our use of energy to have an “easy life”, a low effort life, a life where there is little physical effort on our part individually.

What is the cost?

Ultimately, we are driving ourselves towards a very unpleasant future, we are causing starvation and dangerous tension in poor countries, driving wildlife out of their native habitat.

Where does oil come in?

Again simply put, the faster we burn-up our dwindling global oil reserves the quicker we “bring-on” the combined hardship impacts of climate change and oil shortage.

Global oil discoveries fell behind consumption many years ago, we hear about new discoveries from time to time and numbers sound comfortingly large, the reality is that the frequency and volume of oil find are very small compared to the major discoveries of the early to middle 1900s (Campbell and Laherrère, 1998; Leggett, 2006). Figure 1 gives a graphic demonstration of how global oil suppliers have gone from growth in output, through peak production and are now into their decline phase.

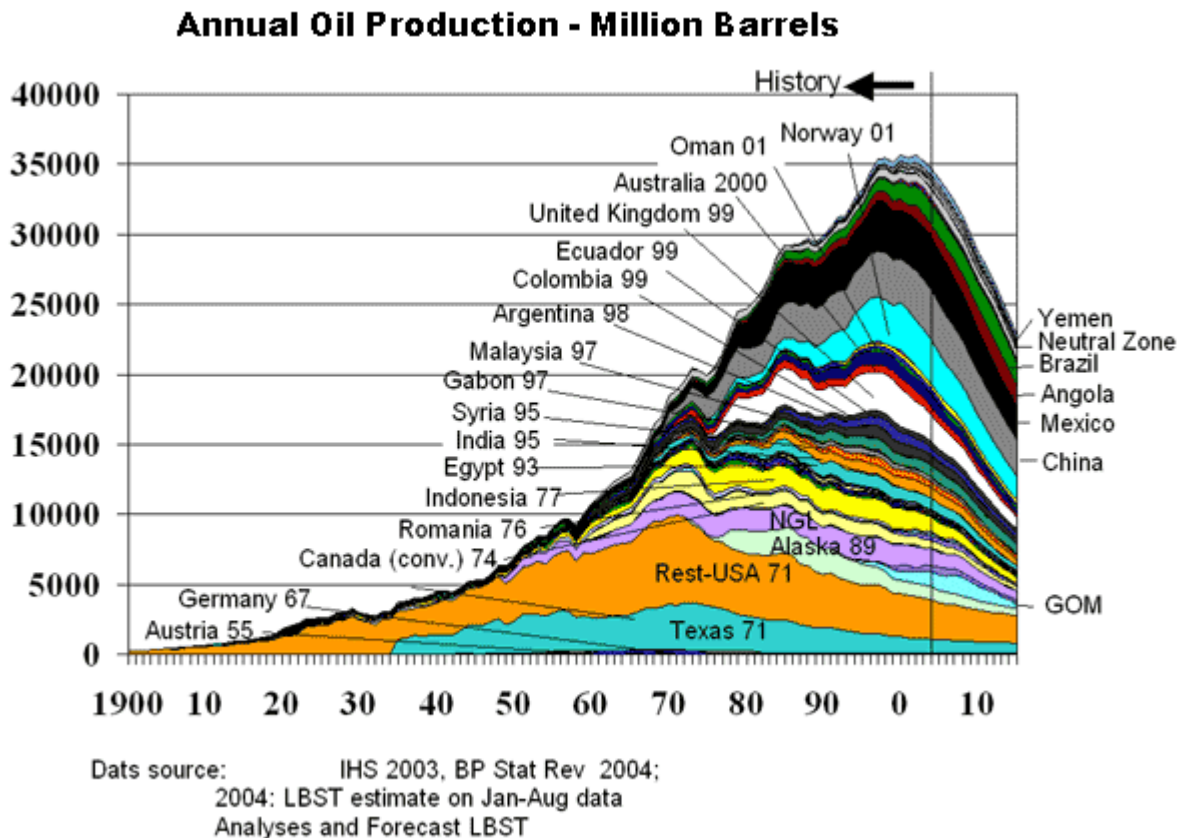


Figure 1: Global oil production showing the year national producers hit peak production and went into decline (after Zittel and Schindler, 2004).

Not only are we not finding much oil, we using more than we ever have before and our demand is growing – our population has grown – approximately doubled since 1970. China and India have been mechanising and their demand for oil and it’s by products has risen dramatically in the last ten years. This means the pressure to supply global demand has grown (see Rubin and Buchanan, 2006; ICF Consulting, 2005).

For the past two to three years the ability to produce more oil has been hampered by conflict, old oil-fields going into decline, and the lack of new discoveries. Iraq and Hurricane Katrina have both reduced global oil production, if the US bomb Iran we are likely to see further disruption in production and **oil prices will rise sharply** (Australian Insititute of Petroluem, 2003; Australian Investment Review, 2006).

Currently, increases in oil price are impacting poorer countries – this is known in the business as “Demand Destruction” – the oil gets too pricey, the poorer buyers buy less (Reaz and Hasibur, 2006) and this may in turn impact on our food supply.

Australia sits at the end of a very long supply line for oil (Australian Institute of Petroleum, 2003). Oil from the Middle East takes 4 weeks (20% of supplies) to reach the west coast and from Asia to the East Coast takes around 15 days (around 40% in 2003). **We have plans to cope with fire and flood and national emergencies. Yet, we have not set up systems to cope with an oil-shock or the longer-term down-turn in global oil production that results from the decline in global oil reserves “Peak Oil”. A disruption in supply of oil will very rapidly result in a national emergency.**

In Adelaide we have only 17 days reserve supply (storage) and in the last few years have our reserves have fallen as short as 3 days. **Three days is a very short time when you oil products travel thousands of miles to get here!**

What would happen if our oil ran-out?

Our food supply and distribution system – including the public being able to get to the shops – would collapse. **How many days ahead could you survive from your larder or garden?**

This is perhaps the single most important consideration – how would we feed ourselves. All other matters become insignificant when basic survival is at risk.

There is a wealth of well-researched papers and reports on oil-supply issues and I urge the Commonwealth and State Governments to start to look at these issues very seriously – now, before we end-up looking very foolish. We bought 10,000 body bags out of concern about bird-flu, yet we've done nothing to prepare for a world where oil availability is becoming increasingly tight and vulnerable to disruption.

#### **WHAT CAN WE DO AS INDIVIDUALS AND AS A SOCIETY TO REDUCE OUR RELIANCE ON IMPORTED OIL AND PREPARE FOR SUPPLY DISRUPTION?**

The actions of each individual make a contribution to the whole. If we can view this as the responsibility of everyone and instil in our minds that our actions when summed together can make a positive impact then there is some hope that we can make major progress. Without the cooperation of the majority the effectiveness of whatever initiatives are undertaken will be diminished and we can expect a greater proportion of the more serious consequences of global warming and oil disruption.

We need to overcome the “us and them” attitudes which have tended to polarise communities and societies in the past. These are issues that impact all, globally.

Key areas where greater attention is required:

1. Devise an Oil Disruption Emergency Action Plan (ODEAP).
  - Emergency fuel rationing when reserves fall below a certain threshold (e.g. ten days)
  - Priority access to fuel for public transport and food distribution and production and essential services
  - Ban use of AWD vehicles during crisis period
  - Screen regular public information films
2. Encourage localisation of food and industrial activities
3. Encourage organic food production and home growing initiatives

4. Introduce compulsory food labelling to **clearly** demonstrate that food is:
  - Imported
  - Interstate
  - Locally produced (*the International Energy Authority recently published its Trade Globally – Act Locally policy.*)
5. Withdraw support for the United States (25% of all energy is used by 5% of the global population) and encourage them to take conservation measures to reduce pressure on global oil networks.
6. Get the new electric REVA car cleared for use on Australian roads – it has been approved in the UK.
7. Reduce our reliance on cars for transport.
  - Get our metropolitan rail corridors electrified
  - Invest in new (and re-establishment of old) tram corridors
8. Tax breaks for:
  - Cycle commuters
  - Motorbike commuters
  - Drivers using small engine cars, i.e. less than 1500 cc.
9. Tax petroleum products and ACTUALLY fund electrified public transport
10. Expand and increase charges for parking – provide a permit system that penalises people according to age and ability (i.e. cheaper parking for the less fit and able).
11. Screen public information films – make it “cool” to get out of your car!
12. Introduce compulsory school bus services with wardens to prevent bullying and unruly behaviour (i.e. to ensure every child is safe and comfortable).
13. Improve signage of railway stations and information in stations and to identify train direction/destination etc.
14. Other commuter related initiatives:
  - Car sharing
  - Employer minibus service
  - Drive less frequently
  - Odd number/ Even number days as practiced in Paris
  - Congestion charging as successfully established in London
  - Live near to work, or work near to home
  - Work from home – at least some days a week
15. **BARRIERS:**
  - “Global Warming Message / Peak Oil” message inadequately communicated

- Lack of language to facilitate understanding of relative impacts of individual activities
- Media not “on-side” in communicating message effectively or at all
- Irresponsible advertising that encourages high energy use activities, e.g. owning a large 4WD vehicle
- Short term planning and re-election focussed (i.e. fearful of taking courageous action) government
- SA strategic plan to enlarge our population
- Inflexible planning and policy making
- National Competition Policy

#### **16. ADDRESSING BARRIERS:**

- Legislate to encourage use of small vehicles
- Tax incentives for people who demonstrably use public transport regularly
- Regular TV slots at peak viewing to relay “use public/car for the weekend” message
- Clearly demonstrated strong and courageous leadership by government
- Legislate for responsible advertising – or have compulsory “health warnings” on adverts in the same way as cigarette packets
- Modify the SA strategic plan to plan for a stable population
- Wake-up to “Peak Oil”
- Make plans flexible. Drop the need to defend decisions. Work on the basis that a plan is based on the best available information at the time of writing, as the evidence and available knowledge changes, adjust the policy/plan to suit the best outcome with the updated information
- Introduce mileage charges that encourage low mileage (with dispensations for remote communities)
- Create incentives to increase rail freight

#### **17. MEASURING PROGRESS:**

- Monitor petrol/oil/diesel consumption/purchases
- Monitor weekly rail bus passenger miles
- Publish weekly graphs/tables demonstrating changes in use of public/private person miles
- Have Bureau of Meteorology report energy usage with UV index and weather – since it is impacting on weather! Report whether the demand is up or down and what the trend is doing

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Web resources to investigate (note: a google search on “peak oil” will get you 2,000,000 hits):

- [www.aspo-australia.org.au](http://www.aspo-australia.org.au) – The Association for the Study of Peak Oil and Gas - Australia
- [www.adelaidepeakoil.com](http://www.adelaidepeakoil.com) – The website for Adelaide – ASPO associated
- [www.peakoil.net](http://www.peakoil.net) – The global website of ASPO – See Swedish plans to reduce oil reliance by 2020, news about Saudi oil fields going into decline, the Chevron advertising campaign and much much more.

Final Note:

These issues are not going to go away, tension over access to oil will grow, the consequences of global warming will worsen (whether they are immediately apparent to us or not), the time for action is now and I urge this committee to make a “big noise” and help set-us on a path that will at the very least cushion the blow from the impacts of our irresponsible attitudes towards population growth and energy use.

Wishing the committee, foresight, wisdom and courage,

Dr Jeremy Wilkinson (convenor Adelaide Peak Oil – associated with ASPO Australia)