



Motion for peak oil select committee in South Australia

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The speech below is by Australian Democrat Sandra Kanck, in the South Australian Parliament. Taken from the [South Australian Parliament Hansard](#) - via [Energy Bulletin](#)

The Hon. SANDRA KANCK (16:11): I move:

1. That a select committee of the Legislative Council be established to inquire into and report on the impact of peak oil in South Australia with particular reference to --

1. The movement of people around the state, including --

- i. the rising cost of petrol and increasing transport fuel poverty in the outer metropolitan area, the regions and remote communities;
- ii. ways to encourage the use of more fuel efficient cars;
- iii. alternative modes of transport;
- iv. . the need to increase public transport capacity; and
- v. implications for urban planning;

2. Movement of freight;

3. Tourism;

4. Expansion of the mining industry;

5. Primary industries and resultant food affordability and availability;

6. South Australia's fuel storage capability including --

- i. susceptibility of fuel supply to disruption; and
- ii. resilience of infrastructure and essential services under disruptive conditions;

7. Alternative fuels and fuel substitutes;

8. Optimum and sustainable levels of population under these constraints;

9. The need for public education, awareness and preparedness; and

10. Any other related matter.

2. That standing order 389 be so far suspended as to enable the Chairperson of the committee to have a deliberative vote only.

3. That this council permits the select committee to authorise the disclosure or publication, as it sees fit, of any evidence or documents presented to the committee prior to such evidence being presented to the Council.

4. That standing order 396 be suspended to enable stranger to be admitted when the select Committee is examining witnesses unless the committee otherwise resolves, but they shall be excluded when the committee is deliberating.

Our world is in the process of being substantially altered as a consequence of a phenomenon

known as peak oil. Peak oil is a shorthand term to describe the dwindling world oil supply -- a shortage that will only get worse as time progresses. This is because all the big easy-to-find and easy-to-extract oil fields have largely been discovered and exploited. What remains are the smaller ones with greater technical extraction difficulties and with, of course, associated high costs. We will not run out of oil -- at least not in the short term -- but there will be less of it and it will be more expensive. This problem is being exacerbated by the burgeoning economies of India and China; so, just as supply is decreasing, demand is increasing. The latest BP 'Statistical Review of World Energy' states, 'It is no secret any more that for every nine barrels of oil we consume we are only discovering one.'

I first became aware of the concept of peak oil 12 years ago when I attended a talk given at Adelaide University by a former oil company researcher, Brian Fleay. He had knowledge of a secret Saudi report showing that our world was getting close to the halfway point of exploitation of all known and unknown oil reserves. As a result of that talk, I became aware of the work of M. King Hubbert, a Shell oil petroleum geologist, who in 1956 predicted that the US production of oil would peak in 1971 -- and he was proved correct. He was listened to with great respect after that and his theory has come to be accepted as fact.

The pessimists believe that the world peak was reached in 2006, and the supreme optimists are even hanging out for a 2035 scenario -- although I have to say that the numbers of those optimists are dwindling. Then we even have the occasional ostrich with its head buried in the sand -- such as OPEC -- which says that there is no problem. But it is well known in the industry that OPEC fudges the figures and, when looking at this issue, we should be acutely aware that the value of an oil company on the stock market is almost entirely dependent on the amount of oil in any one basin it owns. It is always in their commercial interest to exaggerate the amount of their oil reserves.

The evidence is against the optimists, and it is instructive to look at World Energy Outlook reports of the International Energy Agency (IEA). In its 2005, WEO report the IEA was predicting a crude oil price of \$US47 a barrel by 2012, gradually increasing to \$US55 by 2035. I should point out that when I am talking dollars at any point in terms of the price of oil I am talking US dollars.

Anyone who drives a vehicle knows that, despite the fact that that was only three years ago, those figures are wildly inaccurate. In each successive year the WEO report becomes increasingly dire. A report entitled 'Peaking of World Oil Production' by Hirsch, Bezdek and Wendling, prepared for the US Department of Energy, and handed to that department in 2005, states:

The world has never confronted a problem like this, and the failure to act on a timely basis could have debilitating impacts on the world economy. Risk minimisation requires the implementation of mitigation measures well prior to peaking. Since it is uncertain when peaking oil will occur the challenge is, indeed, significant.

In so many ways economies at state, national and international level are built on oil. The massive movement of people and goods around the world utterly depends on it. I turn again to the comments made 12 years ago at that seminar I attended by Brian Fleay. He said, 'Wealth is based on energy and all costs are energy costs.' It is clear that we have failed to recognise this concept and we have treated oil as if it is inexhaustible. What is closing in on us is the equivalent of an economic tsunami and we, especially the state government here in South Australia, are going about our lives in ignorance of it. Peak oil does not even rate a mention in our State Strategic Plan.

South Australia has no transport plan. If there was an understanding of peak oil, we most certainly would have one. The transport minister's recent rejection of the extension of the Noarlunga line has further demonstrated that lack of understanding. The extension of Adelaide's urban growth boundary and development such as the proposed Buckland Park urban subdivision

is reflective of that same lack of understanding in the urban development portfolio. Buckland Park is both a climate change and peak oil nightmare.

At the national level that same ignorance exists. As I have previously elaborated in this place, the transport-related promises of both the Labor and Liberal parties in the recent federal election were, despairingly, almost entirely about roads. Yet, in May 2005, the then Premier of Queensland, Peter Beattie, listened to the concerns of the member for Hervey Bay, Andrew McNamara, and set him up as the chair of the Queensland Oil Vulnerability Task Force. Its report was tabled in the Queensland parliament in October 2007 and it recommended the development of a Queensland oil vulnerability mitigation strategy and action plan. Queensland's minister for sustainability responded by saying that Queensland would have to adopt a wartime mentality in regard to oil use, and a committee has now been set up to prepare that recommended strategy.

That will be released later this year. It will be more than three years since the report was commissioned, but it is three years ahead of South Australia.

The Senate's Rural and Regional Affairs and Transport Committee conducted an inquiry based on a very conservative question, somewhat like: will the sun rise tomorrow? The question was whether Australia should be concerned about peak oil. It tabled a report entitled 'Australia's Future Oil Supply and Alternative Transport Fuels' in February 2007, but I am unaware of any government response or actions arising from that.

The Queensland report considered three scenarios of low, central and high in relation to petrol prices and made observations about the implications under each of the scenarios. The authors assumed that the most likely scenario was the central one; that is, oil prices averaging -- listen to it -- \$58 to \$60 a barrel between now and 2015, then reaching \$70 to \$80 a barrel by 2050. The high scenario assumed that prices would rise to \$110 to \$115 a barrel by 2050.

History tells us that, only two months after the release of that report, the average price for December in the world was \$87 a barrel and it hit an historical peak of \$100 a barrel early in January this year. Although it has fallen back a little since then, it remains remarkably high and the average January price, which I understand will be revealed by OPEC in a few days, is expected to be \$94.

We are already facing the high scenario that the Queensland Task Force did not think would be with us until nearly 2050. It demonstrates how quickly this situation can get out of control without government having strategies in place. We might be able to exert some control over the situation, but oil market volatility could plunge the economy into crisis. We think of oil principally in terms of transport -- driving cars and trucks, running buses and trains, and flying planes. Higher prices for use of the private car will most certainly result in social disadvantage. Anywhere in our large cities those with less income are pushed to the boundaries in order to obtain housing. Adelaide's urban sprawl is a direct result of oil dependence and an unstated expectation that oil will always be there.

People living on the edges of cities are almost always car dependent because public transport appears never to be factored in with urban expansion. They are usually carrying higher levels of debt, often having recently purchased housing and, because they live on the outskirts, often there is no business or industry to provide employment, so they are forced to commute long distances in their cars. They start off being on lower incomes, they have more debt, more of their income is expended on fuel, and the impact is worse, creating fuel poverty. This raises serious questions about the wisdom of expanding Adelaide's urban growth boundary. Peak oil will most certainly increase locational disadvantage.

Regional areas will be hit harder still because, as always, their food and commodity costs include the extra cost of petrol to get those commodities there. The state government will have to look seriously at providing assistance to rural cities and towns with public transport. One of the risks

associated with rising costs in rural areas is a further loss of population to Adelaide and larger regional cities. Our government will have to find strategies to deal with that influx of population.

The South Australian government could be taking action on a variety of fronts to encourage the use of fuel-efficient cars by, for instance, offering lower registration costs. I know members would be aware of the Solar Shop's attempts to have the Reva electric car registered; it has been refused because of the question of impact in a road crash. However, we do not refuse to register motorbikes, despite the impact that occurs to them in such crashes. We know that the Reva has potential as an alternative mode of transport. Why not simply create a new category of registration?

Another thing, in terms of transport, the government will need to consider is car pooling, and perhaps it may have to become compulsory. We need to look at bus-only lanes; we need to look at the soft technology, such as scooters, cycling and walking. As far as work is concerned, we are going to have to look more at telecommuting, where we stay at home to do our work but we communicate via our computers.

Quite simply, a very obvious solution is developing public transport. More services more often will be an essential part of moving people around. As international destinations like Toronto, Vancouver and Portland have demonstrated, people do not take their cars to work when they know they will never have to wait more than 10 minutes for a bus, train or tram.

As well as the carrots, such as the increased frequency of public transport, we may have to look at a little bit of stick as well. For instance, we may have to look at a congestion charge for people taking their car into the city at certain times of the day. If we were to do that, I would suggest that the money raised would be hypothecated back to public transport infrastructure and rolling stock. Even a congestion charge has social implications, because it would mean that taking one's car into the city at those times of the day would be the preserve of the rich.

What are the implications for urban planning? How much urban consolidation do we need? I have certainly advanced transport-oriented development, where we allow much heavier density of housing close to our railway stations, for instance. In the suburbs, should we be encouraging the quarter-acre block, revisiting the way in which we restrict water usage at the present time and encouraging people to become food self-sufficient? I will talk more about that when I get to agriculture.

In regard to the movement of freight, greater investment in rail infrastructure should be happening now, simply because it is far more fuel efficient. Air travel is highly fuel intensive, and it is likely that in the future this mode of travel will be used only for business purposes rather than tourism. Andrew McNamara, the MP who was chair of the Queensland task force, says:

You can't fly 747s on biodiesel or ethanol or hydrogen -- it is air gas or nothing...the viability of the international tourism industry by air transport is at stake..we need to be looking very hard at how we use fuel for petrol for those things that only petrol can do.

The tourism industry is highly reliant on transport mobility, whether that be bus, car or plane. However, if the fuel gets too costly, such holidaying will become an option for the rich, with the resultant economic impact on our tour and hotel operators. I hope that, once this committee is up and running, the Department of Tourism will make a submission to the committee about how it proposes this matter should be addressed.

We are told by the South Australian government that we are on the brink of a mining boom. I do not have figures for South Australia, but the Queensland task force report does, and I suspect that, given the distance of mining ventures from cities and ports in Queensland, there would be a great deal of similarity.

The Queensland report states that the mining industry is the second largest consumer of petroleum products in that state, with oil-based products making up 50 per cent of its energy use. The more remote the mine, the more it is likely to consume, particularly in regard to the use of diesel for power generation. The amount of processing that occurs on site also determines the degree of oil dependence and, therefore, vulnerability.

The exploration stage of mining is highly oil dependent. The South Australian government, with its airborne surveys for geomagnetic anomalies, is dependent on avgas, and on the ground mining companies use diesel or petrol to do their mapping, drilling and collection of samples. Once up and running, the mines use oil products for the extraction and trucking of ore, and flights into and out from the mines in remote areas are essential.

In the case of those mines located close to rural towns and cities, it is highly desirable for moving casual and contract labour to and from those mines. I have a relative who lives on the Gold Coast and who periodically works for BHP Billiton at Roxby Downs, and that company flies him from the Gold Coast down to Adelaide and up to Roxby Downs and then, when he has finished his month or whatever period of time there, they fly him all the way back.

The Queensland report gives some interesting examples of the dependence on oil. New Hope Coal Australia uses 16,063,000 litres of oil to produce 2,068,000 tonnes of coal. that is, 7.6 litres of diesel to produce one tonne of coal. The Association of Mining and Exploration Companies needs 10 million litres of diesel to produce 100,000 ounces of gold, that is, 100 litres for one ounce. A Caterpillar 77D large truck hauling 95 tonnes in a load uses 77 litres per hour of diesel, when it is a well-tuned and well-maintained vehicle. So, one truck uses 1.5 million litres of diesel per annum. The mining boom predicted for South Australia will not happen in a hurry unless the peak oil issue is addressed.

I turn to the issue of farming and food, and I quote again from the Queensland report, as follows:

If it can be synthetically produced commercially (rubber, chemicals, plastics, dyes, inks, fibres, adhesives paint) it will today probably derive from the oil or gas industry.

Agriculture is often described as a way of turning oil into food. Not only do farmers need oil fuel for their tilling, reaping and taking their product to market but they also need it for their fertilisers and pesticides. Ninety per cent of the energy used in agriculture is oil-based.

In Australia we begin food production with low fertility soils. We have been exporting our produce to the world, but this has been possible only because of the use of oil-based fertilisers. Queensland's report recommends that no subsidy be given to farmers, and the resulting price increases will force them to adapt and create efficiencies. So, should farmers have to absorb the extra costs, and, if we are telling them that that is the case, are we talking about forcing farmers off the land? I suspect that in the end farmers will have to pass on the costs on a user-pays basis, because I do not think we can expect the farming community to bear that. Without the pesticides and fertilisers they have become used to, will farmers have enough produce left to export? If not, what impact will that have on our state's economy?

As a consequence of climate change and reductions in water we can expect dairy products to increase in cost, so we are already bearing a cost in terms of our food. I was also surprised to find out, during my research, that fishing will be quite strongly impacted by peak oil, given that 30 per cent of their costs are fuel-related, and this has been increasing as distances to reach fishing resources have increased. So, we can expect the price of fish to rise. I raised the question earlier regarding whether or not we will have to revisit water restrictions and the way we use water to, perhaps, encourage people to plant their own agricultural products in their own backyards and become self-sufficient in their own food.

Australia has already reached its oil peak and our reserves are on the decline, with less than 70

per cent of our oil coming from local fields. This means that we are now seriously dependent on imported oil, often from parts of the world which are politically unstable. Australia is supposed to maintain an equivalent of 90 days' oil supply, according to the Agreement on International Energy. In practice, Australia is lucky to have 50 days' supply at any one time.

At a state level the situation is far more drastic since the closure of the Port Stanvac refinery. South Australia holds between 10 and 17 days of petrol, and there were two days in December last year (I am talking about only five or six weeks ago) when the supply of diesel was one day short of nothing -- a potential disaster for our freight transport and Adelaide's train services.

Without a refinery the South Australian government might have to start prioritising the use of diesel. For instance, most remote communities are dependent upon diesel for their electricity generation, and perhaps the state government will be able to assist many of these communities with the installation of solar and wind alternatives. If Port Stanvac was used as a tank farm it could give a 30 days' reserve supply to South Australia, but this would put in doubt the state government's plans to use that site for a desalination plant.

Alternatives to fossil fuels must be investigated and advanced. There is a federal rebate at the moment to convert cars to gas, but this is only a short-term solution as the world is also running out of natural gas. Biofuels are touted as one alternative, but they can also result in food price increases when land that was producing food for human consumption is turned over to crops that can be used to create transport fuels.

The International Monetary Fund says that in 2006 around the world this accounted for a 10 per cent increase in the price of food over the previous year. Ethanol is another possibility, but overall ethanol is a net energy loser; more energy is used in the cropping and production than is produced. Dutch Crown Prince Willem-Alexander says, 'The amount of water needed to produce biofuels for the tank of an SUV equals the amount of water needed to feed one person on grains for a whole year.' This demonstrates that in finding fuel alternatives we must also look at climate change and related water impacts.

Some in Australia see the abundance of coal as a potential saviour, but the process of converting coal to oil produces huge amounts of greenhouse gases. Forgetting all the other arguments I have about nuclear energy, it is not a solution because it is not an alternative to oil. I do recall that as long ago as 1986 Professor Martin Green was saying that, with the solar technology we had, we could turn the roofs of our carports into solar collectors, put in an electric car, and we would have enough charge in our batteries to travel 80 kilometres -- which would allow most people to get to and from work every day. That is another possible solution.

I go back again to the REVA car; if we are prepared to create another registration category we might have just a part of the solution. We have seen the announcement of the closure of Mitsubishi, and I have called for that site to be used for the manufacture of solar buses; however, it could equally be used for an electric car industry.

When the squeeze is on resources, as it is as a consequence of climate change and related water scarcity, combining those two factors with peak oil must cause us to question those who argue for increasing our population in South Australia. The so-called international green revolution allowed the growth of populations throughout the world because agricultural output was increased through the use of fertilisers and pesticides but, as the price of these increase in response to peak oil, will that revolution grind to a halt? Can the existing population be sustained at the current levels of affluence? I contend that if we are to increase the population here in South Australia we will have to accept a lower standard of living.

I have no facts or figures but, in talking to members of the public, it is clear that knowledge of peak oil is severely lacking, with many people never having heard the term. This is somewhat akin to the situation in the late 1980s when the environment movement talked about the

greenhouse effect. Given the huge potential for economic and social dislocation, it is important that the public becomes aware of peak oil so that when government has to implement drastic action the electorate can at least understand what is happening and why.

The IEA's 2005 report, *Saving Oil in a Hurry*, recommends development of a plan. What a great idea! It states:

Communicating this plan to the public also appears very important. If the public is not well informed of plans ahead of time and supportive of them, they may be less likely to cooperate and do their part to help the plan succeed during an emergency. Strong support and cooperation from the business community is also essential.

When MPs move a motion such as this, we usually include a final term of reference, 'any other related matter', to cover things we might have neglected to include in the terms of reference. I have done this quite deliberately, because I know that I have left out some items in the terms of reference. However, here is a sample of some of those things that others, when they make submissions to or appear before the committee, might raise with us.

Plastics have become a mainstay of the developed world; think of just the bottles of water we purchase and think of the plastic around our computers, the consoles, the package in which the hard drive sits, and the screen; they are all plastic. Some of the fabrics of our clothes are made from petrochemicals, as are our phones, paints, garden hoses, radios and TVs. If you look around, you will find how dependent we are on plastics and, therefore, oil.

Lester Brown, from the Earth Policy Institute, has somewhat wryly observed that supermarkets and service stations are now competing for the same commodities. So, what are the alternatives to plastics? What will be the impact on essential services is another question we have to ask. What about health? The pharmaceutical industry is highly dependent on the petrochemical industry. What sort of industries will we be able to sustain in South Australia, and where will they be located?

How will we deal with the intransigence of the road transport lobby when recommendations are made to reduce road construction? How will climate change interact with peak oil? Will we have double the trouble, or does dealing with one assist the other? Will our new super schools have to be disaggregated and relocated in order to put them within walking and cycling distance of the homes of the students? These are just some of the many questions that might be put to the committee.

I would like to look at what is happening internationally -- again, perhaps to illustrate that we are behind the eight ball here in South Australia. There are a few places in the world that have understood the seriousness of the situation, and the select committee might be able to turn to them for inspiration and example. Sweden aims to be close to becoming oil free by 2020 by replacing all fossil fuels with renewables. Its Minister for Sustainable Development says that oil dependency is one of the greatest problems facing the world.

A series of self-designated 'peak oil transition towns' have been set up in the UK, including Totnes (which has developed its Energy Descent Action Plan), Bristol, Lewes, Falmouth and Stroud. Individual cities in the US, such as Ashland in Oregon, Austin and Dallas in Texas, Oakland and San Jose in California, and Seattle in Washington, have publicly recognised that there is a looming problem. When you look at the public transport systems that already exist in some of the cities, it is clear that they have a head start on us.

Other cities, such as Portland in Oregon and Bloomington in Indiana, have gone beyond that and have action plans. Portland has established a Peak Oil Task Force that produced a report with a principal recommendation of 'act big, act now', and I cannot think of a much better recommendation. The US House of Representatives has a bipartisan peak oil caucus, and it has

recommended that the US, in concert with its allies, should establish an energy project along the lines of the 'Man on the Moon' project it set up in the late fifties and early sixties. It says that this should be done with the same urgency and creativity with which that project was tackled. Eight months ago, the British parliament formed its All Party Parliamentary Group on Peak Oil and Gas.

As I reach my conclusion, I want to thank members of BOSA (Beyond Oil South Australia), namely, Michael Lardelli and Jennifer Bain, for assisting me in refining the terms of reference for this committee. Michael regularly sends me BOSA news, which keeps me up to date on the good and the bad news about peak oil.

Jennifer emailed me a copy of a large report on peak oil she has prepared and sent to her local MP, Jane Lomax-Smith. I know that she was about to meet her local MP to discuss it, and I sincerely hope that Jane Lomax-Smith has read it because, if she has, she will be a convert to this cause and, I believe, will argue the case with her colleagues that they support the setting up of the select committee.

I have to say that this report was a marvellous resource. I had prepared my speech, but I found that I needed to expand it, as her research directed me to other reports, projects, comments and websites. Yet, despite enlarging my remarks, I have merely skimmed the surface of the dimensions of the problem that is peak oil.

I remind members, as I have told them before in this place, that the former US secretary James Schlesinger said last year that there was no longer a debate on whether or not the peak oil concept was arguable, that 'we are all peakists now', and that we will face great difficulty in dealing with it. The IEA predicts that the first supply crunch will happen within five years, so we need to act quickly.

Ian Dunlop, a former oil, gas and coal industry executive, speaking on the convergence of climate change and peak oil, said, 'Policy must ensure that solutions to one reinforce and do not conflict with solutions to the other.' Eleven months ago, he said that Australian governments had to act within six to 12 months. The Hirsch report, which I have referred to before, states:

Without massive mitigation more than a decade before the fact, the problem will be pervasive and will not be temporary. Previous energy transitions (wood to coal and coal to oil) were gradual and evolutionary; oil peaking will be abrupt and revolutionary.

It is highly likely that we do not have the decade for preparation the Hirsch report recommends, in which case this committee, and any recommendations it might make, are urgently needed.

Brian Fleay told the meeting I attended 12 years ago that the substitution of energy for labour will no longer be viable when peak oil begins impacting, that a global economy will not be viable and that economic growth will end. Governments should be acting now while they have money in the coffers to deal with it. Delaying action will exacerbate the problem as the tax revenue will begin to decrease as peak oil takes its hold.

Ian Dunlop said that 'visionary, principled long-term leadership is needed for government, community and business'. I cannot indicate to members just how strongly I feel about this subject. I have a huge sense of frustration. It seems that we are standing on a precipice with blindfolds on our eyes. Supporting this motion might take us just one step back from the edge of the cliff. I hope I gain the support of all members in getting this committee established urgently.



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