

An Open Letter to Kevin Rudd, Prime Minister of Australia

3 December, 2007

The Hon Kevin Rudd MP
Prime Minister
Parliament House
CANBERRA ACT 2600

Dear Prime Minister,

Firstly, congratulations on your historic election win. Your promise of “new leadership” and a focus on Australia’s future are certainly needed at this time.

You have come to power at a time of a looming worldwide economic crisis; a time when we desperately need new leadership to deal with the immense problems ahead of us and an end to the deception, denial and neglect that characterised the Howard era. The news is in and it is very bad news indeed:

- We have now almost certainly reached Peak Oil. The highest ever level of worldwide production of “all liquids” was in 2006 and conventional crude oil was in 2005. It would now take a minor miracle to raise production above these levels and the rate of decline is almost certain to accelerate over the next few years such that “business as usual” is impossible. **(Note 1)**
- Global Warming is proceeding much faster than most scientists expected and we are completely clueless on how serious the problems will be and how fast they will unfold.

I do not address the Global Warming issue in depth in this letter because no actions by your government alone can have any significant impact on the problem as it is a worldwide problem, where extensive damage has already been done and major consequences are now inescapable. However, I must stress that I fully support major initiatives in renewable energy development, energy conservation and a global plan of action through the UN because these are the correct actions to mitigate the crises being brought about Global Warming and by Peak Oil.

Even though the effects of climate change are likely to be very serious, they are largely unknown and will play out over the coming decades. However, Peak Oil will have major consequences over the coming years – *during your time as Prime Minister.*

The unfolding crisis is in several ways analogous to the sinking of the Titanic. We are now at the stage where the ship has hit the iceberg and is already taking on water; its fate is sealed.

The crew is now trying to avoid panic by the passengers by announcing “All is well, the ship is unsinkable, there’s no need to launch the lifeboats”. Unfortunately most of the crew is yet to realise that this is simply not true – they are optimists, still in the denial of the dreadful truth.

There is an urgent need for recognition of the problem so as to best manage the crisis. Denial of the problem at this time will lead to inaction and a far greater disaster, just as it did on the Titanic.

Like the Titanic, this crisis was caused by gross negligence and hubris that led to the belief that the ship was unsinkable. The inevitability of Peak Oil and its effects have been known for decades, but rigorously denied, based on the belief that our technological prowess has made us invulnerable to reality.

Welcome to the job of Captain of the SS Australia.

Peak Oil and the Unfolding Economic Crisis

To those unstudied in PO, it initially seems “no big deal” - something that, to some Greenies, will stop us destroying ourselves or something, to the Economists, that the market and technical innovation will deal with. Both are extremely misguided by their respective ideologies and just flat wrong.

The bad news for the Greenies is that far from being that which will save us by reigning in capitalism, it may well result in our demise through social dysfunction and the use of any available energy source, no matter how environmentally destructive.

The bad news for the Economists is that the market and technical innovation is completely unable to provide solutions to the demise of its staple food source – cheap energy. It has been assumed that as crude oil declines, we will turn increasingly to “alternative” sources of oil. This is a ridiculous assumption, based on hubris and blind faith; it is completely detached from reality. *There are simply no alternatives to oil* – no combination that can be obtained fast enough and in sufficient quantities to replace the dwindling supply.

What we have seen over the last 3 years of significantly higher oil prices is massive stimulation of efforts to increase supply, but the small increases in supply have not matched the declines in the large mature oil fields. We have seen demand fall to match supply by means of poor countries simply falling by the wayside. Now the world is guzzling its way through its trading reserves, but this can not last for long.

Very soon we will face an oil supply shortfall which results in dramatic escalation in the oil price. As the price increases, people will do what they can to reduce their usage. However, very quickly the discretionary use of fuel (trips to the coast, overseas holidays, interstate travel, etc) will be reduced to almost nothing.

At first this doesn't sound that bad, but consider what it means for our service based economy. At best, it means a downturn and at worst, a collapse of the tourism industry, the airline industry and the rest of industries based on selling us stuff we want but don't actually need. It means unemployment for many thousands, along with the bankruptcies and foreclosures of people's homes.

The result will be a recession, which drives down demand to match supply through “demand destruction”. A mild rate of decline (say < 1.5% p.a.) may result in a mild recession that goes on and on because there is insufficient oil to allow re-establishment of economic growth. The world economy would grind to a halt and a failure of the market system would probably follow.

However, it is far more likely that the economy will overshoot into a recession far more severe than what is required to cut back oil consumption to match supply. Ironically, as in the 1980's, we would then see an excess of oil supply and a dramatic fall of the price. However, unlike the recovery of the 90's, any economic recovery would be short lived due to significantly reduced oil availability due to depletion in the intervening period.

The magnitude of the coming decline in oil availability is truly alarming. In October 2007, the Energy Watch Group – a research body that provides advice to the German government – released a report which states that which is becoming more and more obvious; that we passed the worldwide Peak Oil in 2006. Furthermore, EWG forecasts that the decline rate will be much higher than that foreseen by any other group, including ASPO. EWG predicts that crude production will be down to around two thirds of current production by 2020 and to half by 2030. If these well researched forecasts are correct, it is totally infeasible to reduce consumption by this amount in 2 decades, except through a collapse of our current system.

But the story gets worse. Petroleum geologist Jeffrey J. Brown has developed an ‘Export Land Model’ which models what happens to exports from the major oil exporting nations whose domestic demand is still growing while their oil production is in decline. These nations include Saudi Arabia, Iran, Venezuela, Kuwait, many of the smaller middle eastern oil producers and most importantly Russia – the worlds largest oil producer. The model suggests that it will only take about 9 years from Peak Oil for exports from the major producers to reduce to zero. **(Note 2)** This is very much in line with what actually happened to Britain, where it took only 6 years from peak production for Britain to again become a net oil importer. This spells disaster for major oil importers, particularly the USA and Western Europe.

Right now, the USA seems to be in the initial phase of “The Long Emergency”, as James Kunstler has dubbed it. I think that the only uncertainties are how fast their economy will fall apart and what the reaction of the US high command will be. A collapse of the dollar seems imminent because of the converging effects of the unsustainable boom financed by ballooning consumer debt and the unsustainable flooding of the world economy with US Dollars to import two thirds of their oil as well as a flood of consumer goods. The United States is bankrupt but nobody wants to admit it. The main reasons that in the US Dollar retains any value at all are that a large number of countries hold dollars as foreign reserve, almost everybody buys their oil in dollars and manufacturing countries, particularly China, do not want to see a collapse of their largest market.

The consequences and speed of the downfall of the American Empire are highly unpredictable, but it is certain to be a disaster for the whole world, which ever way it unfolds. I worry that the US high command may do something really stupid, like launching military action to seize oil by force by attacking Iran or Venezuela for example. My only hope is that their current war for oil is going very badly and I don't think the

American people will support any new resource wars. However, this may change if the economy collapses and there is massive unemployment and hardship similar to that of the Weimar Republic of the 1920s.

What Your Government can do about it.

Prime Minister, it's time to tell the crew and passengers the dismal truth and get everybody working together to launch the lifeboats.

Step 1. Tell the Truth

No government wants to tell the truth about the dire situation because that would cause a loss of confidence in the market economy and the government itself. However, you have an obligation to inform the Australian people of the seriousness of the situation and to take action to start to deal with it. You have an obligation to desist with the "all is well" denial and inaction of the previous government; to seek frank, fearless, honest and realistic advice from departments such as ABARE and DITR rather than covering up the problems by seeking only "optimistic" advice that will maintain confidence in the market economy, as your predecessor did.

I contend that it is far better to level with the Australian people before crisis hits than to wait for it to happen and then react by saying "who could have known? – I was deceived!" Well – after verifying what I'm now telling you – *you have no excuse not to know!* To claim that you didn't know would be to claim your own incompetence and the electorate would be justified in throwing you out of office at the next election.

The news must be delivered so as not to cause panic and I do see how difficult that is. The finesse required here is to term the news in terms of planning for the coming oil supply and economic problems. I note that your election campaign rhetoric did mention this very briefly.

Step 2. Start Planning for Major Infrastructure Works

When the economy goes into recession or depression, the only known way that some economic activity can be restored and unemployment reduced is by government investment – Keynesian economic intervention. At the same time as this government intervention is required; the nation has a burning need for infrastructure to allow our society to function with an ever declining supply of oil.

I suggest that these are the most pressing needs:

- Major investment in national electric railway infrastructure – long distance freight, high speed passenger rail and suburban light rail. A vast amount of petroleum is consumed by road freight, air travel and commuting. The majority of it can be powered by electricity. This would also enable greenhouse emissions to be significantly reduced due to the large increase in efficiency of rail transport compared with road and air transport.
- Major investment in infrastructure to better manage our water usage. We need to return the waste water generated by our cities to the land, together with the precious nutrients it contains.
- Major investment in carbon capture and storage. I personally don't think this will prove technically and economically viable, but none the less, we should pursue it until it is proven non-viable. We have no other resource except coal which can be readily deployed to provide the rapid increase in the electricity we need.
- Massive investment in renewable energy. The most promising technologies here are solar thermal with heat storage and geothermal. There is no point in developing large scale intermittent resources such as wind, photovoltaic and wave power because such intermittent generation cannot be managed on a large scale.
- Develop oil from coal technology in Australia, with the up-front requirement that any plant built must sequester the huge amount of carbon dioxide it produces. Again, this may never be viable, but the viability should be assessed. **(Note 3)**

- Get serious about infrastructure to allow bicycles to be used safely for commuting. This includes bikeways, storage facilities, showers and possibly public hire bike depots.

There is a problem with major government investment during the current boom times because such investment would be inflationary. However, this boom will end very soon and the planning behind such major infrastructure works takes years, with only a relatively small amount spent during the planning phase.

Step 3. Start conserving what we have left

Rationing of fuel will be one of the first steps required to deal with the coming shortages. If this isn't done, there will be mayhem – hoarding of supplies, black market profiteering, queues for fuel at petrol stations and crucially, shortages for essential services, particularly food production and distribution. I believe that tradable quotas are the best means of rationing demand as they would allow people with greater needs to buy additional quota and reward those who conserve most effectively.

If rationing was implemented via a worldwide “Oil Depletion Protocol”, where all countries reduce their consumption progressively to match the available supply, this would mitigate the problem in the most equitable way possible, hopefully preventing a breakdown of world order. However, getting the US onboard is bound to be difficult.

The rationing system must also reserve enough fuel to implement the infrastructure works required to adapt to the post-peak world.

Step 4. Get our best and brightest onto developing long term solutions

The size of the challenge that confronts us is truly staggering. I fully support your “Education Revolution” and regard the deliberate neglect of public education by the Howard government as reprehensible. However, there is no point training more economists and bankers for the capitalist system which will not exist for much longer.

A new economic system

The fundamental problem behind all the problems we face; the reaching of practical limits to growth in the case of oil, water and deforestation, and the consequences of the waste products in the case of Global Warming, is that our economy is dependent on economic growth and fails to function without it.

We need an entirely new economic system which must be able to

- function effectively without economic growth
- function to equitably share resources in a world of declining resources
- enable the development of local communities that are largely self sufficient
- facilitate depopulation of the planet
- restore planetary ecosystems

Such an economy may need to be a state run economy, which have a poor track record. We need to learn from the mistakes of former state run economies and come up with something that works. I have thought long and hard about this and can offer few practical suggestions.

A new energy system

We must face reality and understand that we are dependant on large amounts of energy just to meet our fundamental needs and this cannot be changed in years or decades; it will take lifetimes. We must also understand that while there is energy available, we humans will use it because availability of energy is standard of living.

A recent Energy Watch Group report tells the bad news that coal will be peaked out worldwide within 20 to 30 years. It will be simply impossible to provide the minimum energy needs of a population that lives in cities once the oil, gas and coal are severely depleted.

Current technology nuclear power (based on the fission of Uranium235) is only able to provide a relatively small part of our energy needs because viable supplies of Uranium235 are very limited. Developing this technology for Australia would be very short sighted indeed.

Hence I contend that we should get started on developing safe breeder reactors which convert Uranium238 to nuclear fuel and/or breeder reactors that convert Thorium to fuel. Uranium238 is a large resource and Thorium is a vast resource, capable of providing our energy needs for millennia. This is a large technical undertaking that will take decades, but the long term need for it is really beyond question. **(Note 4)**

Conclusion

When one fully understands the magnitude of the problems that we humans have caused ourselves, it's tempting to just throw up your hands in dismay and just give up. Like the Titanic, we are in a situation where no desirable outcome is possible. However, we must do what we can to work for the best possible outcome.

The first step is to desist with the denial of the problems and the fantasy that everything is OK; that the market will sort it out. This involves informing the public about the seriousness of our predicament.

The second step is to get stuck in and do what we can to adapt to our new situation.

If there is any aspect of this letter on which you would like me to provide references or further information, I am most willing to provide this. Stealing your line - I'm from Queensland and I'm here to help.

Most sincerely,

Lionel Orford

Notes added 15/02/08

1. Replace "We have now almost certainly reached Peak Oil. The highest ever level of worldwide production of "all liquids" was in 2006 and conventional crude oil was in 2005. It would now take a minor miracle to raise production above these levels.." with:
"It is highly likely that we have now reached worldwide Peak Oil. The highest ever worldwide production of convention crude oil was in 2005 and "all liquids" production has been essentially flat since 2005. Although a small increase in supply is expected in 2008, it is unlikely that production can be raised significantly above the current levels.." <http://www.theoil drum.com/node/3306> http://www.aspo-usa.com/index.php?option=com_content&task=view&id=281&Itemid=91
2. Replace "about 9 years from Peak Oil for exports from the major producers to reduce to zero" with "about 20 years from Peak Oil for exports from the 5 top exporters to reduce to near zero"
<http://www.energybulletin.net/38948.html>
3. Remove "Develop oil from coal technology in Australia, with the up-front requirement that any plant built must sequester the huge amount of carbon dioxide it produces." I no longer support this because sequestering the CO2 is impractical and it is a misallocation of resources as it will not help us adapt to a post carbon world.
4. I no longer hold the view that "the long term need for (development of breeder reactors) is really beyond question". I now believe that this needs to be rationally considered, but that our primary effort should go into large scale deployment of renewable electricity generation (especially solar thermal with heat storage) and the breeder nuclear reactors option be considered only as a last resort.

About the author:

Lionel Orford is a professional electrical engineer with a long standing interest in renewable energy, energy sustainability and climate change. Lionel has studied the Peak Oil issue in depth since 2004.

For further reading on Peak Oil and other energy and societal issues, go to <http://members.optusnet.com.au/~lionelorford/>