DEPLETION OF OIL

The Greens' campaigns about the depletion of oil are unlike any of their other campaigns in one respect. For some reason they have run this campaign at least five times in the past sixty years. It is like an old shoe that is periodically dusted off, polished, and then trotted out as if new. However, they then follow the mould of all the other Armageddon campaigns using fear and emotion, propaganda, and deceit to convince the public that oil will run out in the next 10-15 years.

The first time I saw this campaign I was a student and was asked to write an essay on how society would cope without oil in 10 to 15 years' time. Even back then, the education system never asked us to critically look at these Green claims but to accept them as a given. In the early 1970s, as a pilot, I was asked by a visiting politician what I was doing to find a new career as oil was going to run out in 10 to 15 years' time, and there would be no planes to fly. Being a youth, I boldly told him I thought it would be a much longer period than that, because the aerospace and automobile industries did not seem to be too anxious to reposition their industries. The reaction from the politician was typical. I was told that he had been briefed by the finest minds in the country, *(I believe a Green briefing, and not one from the petroleum industry)* and it would happen.

Although I am confident that the Greens will continue with these campaigns, the last time I heard the subject broached by a Green, was during a radio interview of Professor Flannery in Sydney in 2006. Feeling at home with a pro Green interviewer and hopefully the audience, Flannery was foolish enough to make several wild predictions one of which was that oil would run out by 2010. Today, in 2011, the number of cars on the road continues to grow, so I think we can declare that all these predictions, including Flannery's latest prediction, were inaccurate. Once again, the Greens were not only wrong, but they were very wrong.

HOW LONG WILL OIL LAST?

To point out the obvious, no one can answer that question. The petroleum industry believes that we presently have 200 years of oil supplies, not 10 to 15 years. But even this estimate should be treated with caution as it makes assumptions about oil reserves, usage rates, and a myriad of other points that cannot be predicted with any certainty. However, the difference between these two estimates is so large I cannot believe the Greens continue to make their predictions on this issue. It is also bewildering that even with so many past prediction failures, large sections of our community believe the Greens' predictions rather than those from the petroleum industry.

The difficulty in making such predictions is caused by several dynamics that are involved which undermine the simple non-dynamic view on which most of these predictions are based. In their simplest form, those making such predictions[1] do

their best to estimate the oil left in the world and then divide such a number with their best estimate of an annual usage rate. What is not considered is:

- How a free market works,
- The effects of alternatives
- Technology and new inventions, and the
- Use of reserves.

If scarcity of oil doubles the price of oil, several things happen at once. Consumers will reduce their consumption as they can no longer afford to buy as much oil. This drop in demand increases the life of oil before exhaustion. If the price remains high, the consumer might change his behaviour by seeking out alternatives (e.g. catching a bus or riding a bike). Demand drops further and the life of oil is again extended. The higher price of oil will encourage several other commercial reactions.

What were expensive alternatives to oil (e.g. Electric or hybrid cars), now might become competitive, further reducing the use of oil. Even if the competitive gap is not closed completely, more research is encouraged on alternatives that will achieve this aim. On the supply side, the increased price of oil will encourage more exploration. Non-economic reserves now become economic. Such increases in supply increase the life of oil.

Just as the increased price encourages research in alternatives, there will be an increase in research on finding and recovering oil. Technological breakthroughs from such research can dramatically change this whole dynamic picture. In the early 1970s, drilling for undersea oil could not be carried out at ocean depths exceeding 200 feet. Technology has advanced, and in 2010, oil is being extracted at ocean depths greater than 5,000 feet.

One of the most fragile assumptions made in such non-dynamic views is the assumption that the reserves we have today are the total amount of oil left on the planet today. That is just pure foolishness. The unknown is unkown; so any guesses about the unknown amount of resources left on the planet is a guess, and not even an educated guess. Even a wonderful computer model cannot solve that dilemma! Tomorrow they could find the biggest oil find the world has ever seen. When you look at how little we have scratched the surface of the Earth, you start to get an appreciation of how big the Earth is, and the potential for additional discoveries.

Finally, there is no commercial incentive for any company to spend very large amounts of money to find additional reserves when they already have ‘adequate’ reserves. Why would you waste money doing that? Some minor exploration might be undertaken to find reserves that are cheaper to recover than the existing reserves, but the incentive in this case is not the same as exploration when reserves appear to be running out.

As Lomborg points out, many are surprised at the counter intuitive increase in reserves as we are continually being told that we are using more oil and it will run out. As Figure 1 below shows, growth in oil reserves are outstripping oil production – not the other way round.

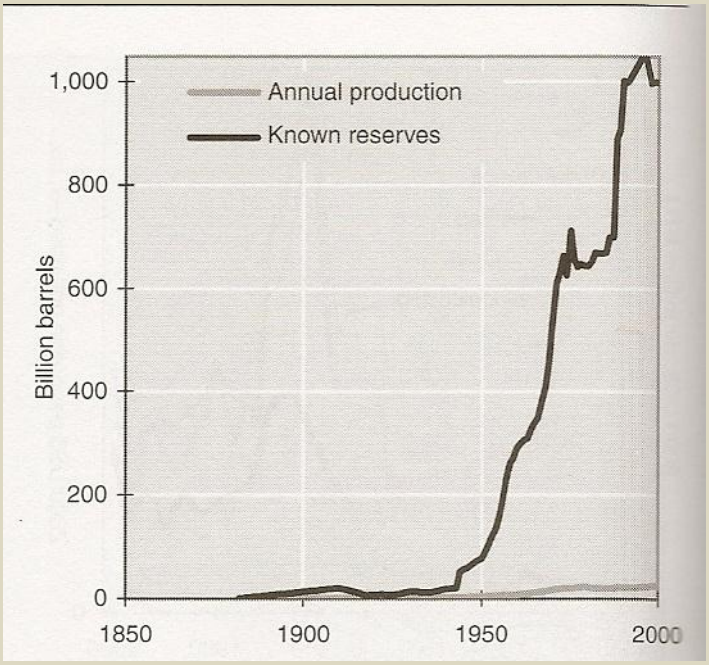

Figure 1. The World's Known Oil Reserves and World Oil Production, 1920-2000

With deep water oil reserves in the Mexico Gulf recently said to rival that of Saudi Arabia's oil fields[3], and similar descriptions of oil in the Arctic regions, it is implausible to suggest that oil will run out in a decade, rather than tens of decades. On the demand side, I also believe, with the continuing improvement in the efficiency of alternate energy sources, in the next fifty years we are likely to see these alternate sources of energy become cheaper than oil and, consequently, oil will be left in the ground rather than ever being exhausted.

CONCLUSION

We can all understand the simple concept of finite resources, and how continued use of oil will eventually deplete a finite amount of oil. This one dimensional academic concept has very little practical use in the real world, as the dynamics of this situation can change rapidly defeating most peoples' predictions about the life of oil. It is insulting to mature citizens for the Greens to repeatedly use scare stories about oil running out in the next 10-15 years every other decade for the past sixty years. If we are to listen to anyone, it should be the petroleum industry.

Even if not much happens in the future, oil is likely to last at least one hundred years. However, before that time, much is likely to change and the likelihood of humans blindly using oil till it is completely depleted is the most unlikely

of all scenarios. We are more likely to see oil being left in the ground than the oil supply being exhausted.

Notes:

1. Even the contemporary term “Peak Oil” suffers from the same weaknesses in making many assumptions and considering the problem in a one dimensional fashion. In some cases it is also being misused to imply depletion itself, or a half-way point in the total history of oil use.
2. Lomborg, Bjorn, “The Skeptical Environmentalist”, Cambridge University Press, Cambridge, 2001, p.124.
3. *“U.S. Oil Reserves Get a Big Boost”,* Associated Press, 6th September 2006.