The Oil Drum: Australia & New Zealand
DISCUSSIONS ABOUT ENERGY AND OUR FUTURE

Climate Code Red: The Case for a Sustainability Emergency

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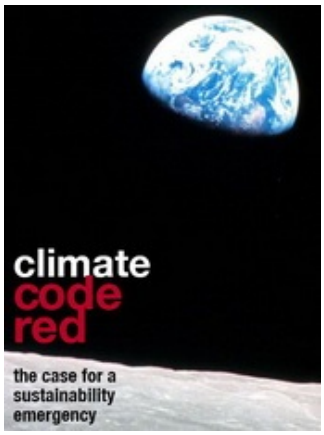
David Spratt from CarbonEquity and Philip Sutton from Greenleap Strategic Insitute have published a pivotal report in Australia titled "Climate 'code red': The case for a sustainability emergency". This post reproduces the report's discussion of why peak oil and climate change must be treated together.

The full report is available from the Carbon Equity website. The dominant theme of their report, and indeed their purpose behind it, is to: **Recognise a climate and sustainability emergency, because we need to move at a pace far beyond business and politics as usual.**



The usual approach to an emergency is to direct all available resources to resolving the immediate crisis, and to put non-essential concerns on the back burner for the duration. Many people argue that in today's world we should focus our attention exclusively on climate because a "single issue" approach is a good way to concentrate people's minds on action, and cut through the competing, lower-priority issues.

While this is a powerful practical argument, is it the right strategy? To test the approach, we need to ask whether there are issues that:

- will be seen, in retrospect, to have caused major problems if ignored;
- are of great moral significance from a caring/compassionate point of view and therefore should not be ignored;
- should be taken into account in the framing of solutions to issues that are tackled during the period of the emergency, because otherwise serious new problems will be created or existing crises will be worsened; or
- are so compelling (for any reason) in the short term that they threaten to take attention away from climate if a one-issue-at-a-time approach is applied?

When these questions are asked, it is clear there are several issues that simply must be resolved together with the climate crisis. There are those that cannot be ignored because their impacts on all people, including the rich and powerful, are so great: for example peak oil, severe economic recession, warfare and pandemics. And there are ethical issues that we should not ignore such as poverty — including adequacy of food supply at an affordable price — and biodiversity protection.

Some examples might be useful to see how this multiple issues approach might work.

It is increasingly recognised that the discovery of geological reserves of cheap conventional oil cannot keep pace with growing world demand. This problem is often referred to as "peak oil". Its emergence is reflected, in part, in rising oil prices and the expectation they will go higher as the gap between supply and demand increases in coming years. A recent Queensland Government task force (2007) found "overwhelming evidence" that world oil production would reach an absolute peak in the next 10 years.

So should we postpone dealing with peak oil until we have solved the climate crisis? Given the enormity of the climate problem, we cannot resolve it before peak oil demands our attention in a very practical way. Or should we put off the resolution of the climate issue until we have sorted out the peak oil issue? It will take at least 10 to 20 years to carry out the economic structuring required to solve the peak oil crisis (Hirsch, Bezdek et al., 2005), yet the economic structural changes that need to be made to solve the climate crisis must be completed in the same time period. Clearly the two issues need to be dealt with together and the solutions integrated.

There are two sets of responses to the peak oil problem, focusing on supply and on demand. The supply-side solution is to substitute new sources of energy for the declining conventional oil resource by using:

- non-conventional fossil fuel sources such as shale oil, tar sands or from the conversion of coal or fossil fuel gas to petrol or diesel; or
- renewable sources such as biofuels (e.g. ethanol or methanol petrol extenders or diesel derived from carbohydrate-rich plants) or other renewable energy types such as wind, solar and geothermal to charge electric vehicles.

The demand-side solution is to find ways to reduce the need to use petroleum products and energy in general.

So if we are to solve the peak oil and climate issues together, in a way that takes appropriate account of other issues, how can we decide on the right mix of responses and appropriate solutions? To solve the climate crisis we need to eliminate human greenhouse gas emissions, take massive amounts of excess CO_2 out of the air and restore the reflectivity of the Earth surface (with clouds and ice being the strongest influences) while maintaining adequate supplies of affordable food and securing the survival of the world's biodiversity.

If non-conventional fossil fuels were to be used and emissions released into the air, it would significantly worsen global warming. So if this supply solution is to be used, then CO_2 must be 100% captured and permanently stored. But since there is already a substantial excess of CO_2 in the air which needs to be removed faster than the natural carbon sinks can do it, we need environmentally safe and economical storage options for sequestering it. So the use of unconventional fossil fuels would either directly increase carbon emissions, or would block the sequestration of the excess atmospheric CO_2.

So perhaps instead we should use renewable energy feedstocks to replace conventional oil? The easiest way to produce renewable carbon-based fuel is to grow crops for biofuel, but the scale of petroleum use is so huge that enormous areas of arable land would be needed. This clearly competes in many cases with food production and habitat protection or restoration. The conflict with food production is already evident in the rising prices of corn (maize), soy beans and palm oil

driven by rising consumption of fuel ethanol and biodiesel, especially in the US and Europe (Vidal, 2007; Sauser, 2007; Styles, 2008; Blanco 2007). And forest clearance to make way for new palm oil trees is accelerating in south-east Asia with serious implications for nature conservation (Butler, 2008).

The other possible class of responses to the peak oil crisis is to actively reduce the demand for energy, for example by replacing current cars with vehicles designed for ultra-efficiency or by enabling a switch from car travel to public transport or walking and bicycles. Another approach is to eliminate the need for mobility by changing land uses to bring destinations together or by making use of electronic "virtual travel" such as video-conferencing.

Another interesting example of the interplay between issues is the connection that now seems to exist between climate, rising oil and food prices, the sub-prime lending crisis and the risk of recession. Since the 1987 Wall Street crash, world monetary authorities have been able to use credit expansion as a tool to stop the economy spiralling into fully-fledged recession. But now that there are strong inflationary pressures driven by rising oil and food prices (and expansionary war expenditure related to Iraq and Afghanistan), monetary authorities are not as free to use credit expansion to increase demand and for the first time in decades there is now a real chance that there will be a global recession (Blas, Giles et al., 2007).

Depending on how authorities respond, the reaction to a recession might either hinder or help effective action on climate change and peak oil. If the recession is allowed to run its course then there could be less money made available for investment in responses to the climate and peak oil crises. Or if governments invest in traditional public infrastructure areas to "prime the economic pump" then we might end up with more roads and freeways which will exacerbate the climate and peak oil problems. **Only if pump-priming investment is framed with the climate and peak oil issues in mind will the response to a recession produce a virtuous cycle of change.**