



100 years of oil?

Posted by [Chris Vernon](#) on April 15, 2006 - 3:47am in [The Oil Drum: Europe](#)

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Spending as much time reading, writing and talking about peak oil and energy as many of us here do I think it's sometimes easy to forget just how small a minority we actually are.

Monday and Tuesday this week I was at the [Royal Society](#) in London for their conference [Energy... for the future](#). I had high hopes for this event, expecting it to stimulate a forward looking, rigorous debate between internationally renowned scientific experts addressing the fundamental challenges ahead.

I was wrong.

Despite the description published before the event including this sentence:

This is timely as we face the global challenges of addressing climate change, providing a secure and reliable supply of energy and the depletion of oil.

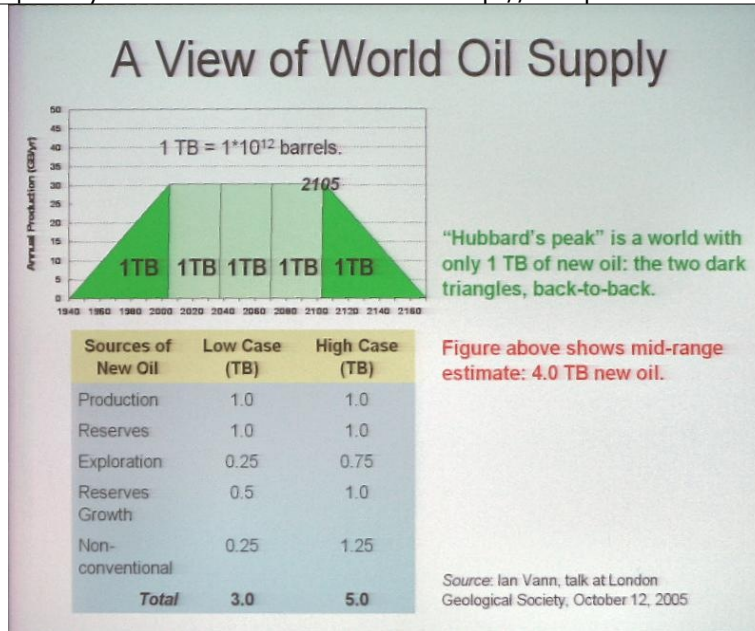
Oil depletion was mentioned a grand total of three times over two days - twice by myself in questions from the floor and once in a slide suggesting there's enough oil for another 100 years.

Update [2006-4-15 3:47:22 by Stuart Staniford]:

I put this on the front page as it seemed of more general interest.

This slide has to be seen to be believed. It was presented by [Professor Robert Socolow](#) from Princeton University. Given his credentials I am amazed he presented such a slide. He holds undergraduate and post graduate degrees in physics from Harvard University, his title is Co-Director, The Carbon Mitigation Initiative and he lists his field as: global carbon management, the hydrogen economy, and fossil-carbon sequestration.

Here is the slide:



Click to enlarge.

The data comes from Ian Vann:

Ian Vann was appointed Chief Technology Officer for BP in September 2001; he is also Exploration & Production Group Vice President. Since joining BP in 1976, Ian has served in a number of roles including Chief Geologist, General Manager of International Exploration, and Technology Vice President, Exploration.

The light green blocks were said to represent unconventional oil, the eagle eyed might also have noticed the spelling of "Hubbert's". How could such an apparently smart guy subscribe to such a position?

It should be noted that Socolow's 10 year, \$20 million project is supported by BP and Ford.

The subsequent two mentions of peak oil were mine. In the same session as Socolow, [Sir David King](#), UK government's Chief Scientific Advisor gave a very good presentation on climate change covering the history of how anthropogenic contribution to the green house effect was first theorised 100 years ago when doubling the CO₂ concentrations were predicted to create a 5°C increase in global temperatures. We now believe such an increase would create a 5°C ± 2.5°C increase! The physics was basically right 100 years ago.

My question to King was:

Chris Vernon

Do you agree with the growing number of scientists and analysts suggesting oil will peak within a decade, possible by the end of this decade and secondly what impact do you think the inevitable peaking of oil will have on climate change?

Sir David King

I think I'm going to answer that very cautiously. I believe there's a finite amount of oil around and I don't think the two of us would actually disagree with that, the question is how many additional wedges do you get into the Hubbert peak. I don't think anyone is in a real position to answer that, but I personally think the key issue here is whatever we do - for example we could use the Sasol process the Fischer-Tropsch catalytic reaction to convert carbon in the form of coal into oil for using as a fuel for transport systems.

I believe if we went down that route we're heading towards carbon dioxide levels which are unacceptable for our planetary needs. So whatever happens I'm more focused on this requirement, if you like the wedges [*a different type of wedge to that in the Hubbert curve above, CV*], that we reduce emissions in every way we can and in doing that we ought to move our transport sector away from its current dependence on fossil fuels.

That's part of the whole process, so looking at bio-ethanol production but also looking at the hydro- one of the nice things about being here that's interesting is that in America it seems to be a Californian project and in this country it seems to be a Scottish project, but we tend to focus on the Peterhead-Miller field project. The importance of those two projects is that hydrogen is produced. Now in the first place they're going to use that hydrogen fuelling power stations, that's probably not the most effective use of hydrogen. Hydrogen can be brought forward towards that hydrogen fuel economy that we've all been looking at where in the future cars on the road will be fuelled with hydrogen and we'll have hydrogen fuel cells as the engine of the process. So I see this as a very important potential step and it's a non-linear feedback, it doesn't quite operate in the wedges, where the enabling of the hydrogen technology with zero carbon production may have a massive impact in the transport sector.

Audio clip available here: [Sir David King.mp3](#) [1.26 MB]

It seems King also subscribes to Socolow's graph above, wondering how many wedges we can fit into the Hubbert curve. I'm also extremely sceptical about a future transport system running on hydrogen fuel cells.

My second question was to George Couvaras, CEO of Sasol Chevron. His presentation covered the use of the Fischer-Tropsch process to manufacture synthetic transport fuels - the driver being lower CO₂ emission and cleaner burning fuels in the vehicle. The main focus was his company's gas to liquids business.

My question to George Couvaras was:

Chris Vernon

I've been listening to the proceedings with a growing amazement that at a conference titled Energy... for the future, the future prospects of our most important source of energy has hardly been mentioned. So to our 2nd speaker, from Chevron, Chevron have recently been running a high profile advertising campaign stating "The era of cheap oil is over". I welcome this public acceptance of peak oil.

Can I therefore ask at what rate do you think that global extraction rate of conventional oil will decline now and how much of this decline can be offset by synthetic fuels.

George Couvaras

First of all I don't come from Chevron side, the joint venture that was formed Sasol Chevron is specifically focused towards the synthetic fuels side and ... the pronouncement that Chevron have made about - there's no cheap fuel around any more, is that correct? And to what extent synthetic fuel will displace the conventional fuels. I did show on my slides that in the next, we're looking at the next 20-50 [*maybe 15? CV*] years time, I can't see synthetic fuels taking any more than about 10% of the middle distillate markets at this point in time. Regarding the Chevron question unfortunately I'll have to refer back to Chevron parent companies.

Audio clip available here: [George Couvaras.mp3](#) [1.06 MB]

Unfortunately I miss quoted the Chevron advertising campaign - it actually states the "The era of easy oil is over". There's not much of a practical difference between cheap and easy however. Disappointing that nothing was said on peak oil and decline rates. 10% of middle distillate market isn't very much - another figure given in the slides was 800,000 barrels per day of distillate product from GTL (across the industry not just Sasol Chevron) by 2015 and that is highly depended on availability of feedstocks.

Summary of the papers to follow.



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