
Transition Network Conference

Ruskin Mills, 31-May-07

Session Notes

Richard Heinberg: Peak Oil briefing

If you don't know a lot about peak oil there are many good books

two web addresses: energybulletin.net and theoildrum.com - talk about Saudi Arabia is extremely important, more technical articles and discussions

Regular conventional crude oil peaked in December 2005. When I first started writing in 2002 I thought it safe to say between 2006 and 2016 we would see global peak in production. Every bit of info we are hearing now suggests that the earlier date is much more likely.

Conventional crude has hit a maximum. All liquid that includes unconventional forms heavy oil etc, that pretty much flattened out and depending how one crunches the numbers looks as though that has peaked as well. Chris Srebowski has been telling colleagues cryptically wait until Christmas. In December this year it will be clear whether we can eek out the regular oil and other liquid oils. Likely it will be this year December 07.

Descent is likely to be about 1%/ year. First few years 1percent per year the problem can be hidden by demand reduction. This has been primarily thru prices, you drive folk out of the market. I am talking about the less industrialised nations Guatemala, Africa, countries that use oil to power electricity. The lights are off most of the time. We don't hear about it in the media. Life has changed in much of the world due to rising oil prices. That has enabled our economies to grow, much of industrial work to happen. China and India are seeing increased consumption that's enabled by high prices driving poorer people out of the market.

After about 2009 the rate of decline is likely to be about 3% per year. There are some other oil production projects coming on line in deep water a producing new supply [but it isn't enough to offset] declines from oil supplies. It is a constant tug of war between new projects for new supply and decline in existing fields and exporting nations.

Oil optimists are always thinking about the new oil supplies if you just look at that you get a pretty rosy picture for the next few years, but if you subtract the declines you get a different picture. After 2009 there are few projects coming online, which is why the decline increases after that. That's where we are right now.

Floor open to questions

For example the relationship between PO and CC is v interesting.

Q: The oil companies and government must be aware of this what's your view on why they are not talking about it?

A: The oil companies are a complex subject. I'm not convinced everyone in the oil industry does understand the issue.

There are people in oil industry that have very specialised occupations and the whole thing is run by economists. In a typical oil co there are v few people doing global analysis, they just look and see that their oil is running out [and if it is they think we better buy another oil company.

They don't have a huge office of people analysing what's going on in Saudi Arabia, or the whole picture. I do meet people in the oil industry they say they feel v much alone because no one at work gets it.

The government are the same, a few people may see what's going on but I'd be surprised if there are more than a dozen people who really understand this. People have such a specialised view that few people have the broader vision.

For example, Chevron has taken out big ads saying that oil is running out. They don't use the word peak oil. David O'Reilly - CEO of Chevron realises that we have an enormous problem facing us.

Meanwhile ExxonMobil has taken out ads saying peak oil is garbage.

I was lecturing in univ of California in Berkley there was one gentleman who was older in the class he didn't say anything until after the lecture. He said he was recently retired from Chevron. He didn't find anything [wrong with what I was saying]. He said he was the head of PR of the campaign what do you know about this 'will you join us'. The CEO is v concerned that America and the world have a v serious problem. On the other hand Exxon is the company that has been denying cc so the fact they are doing it also about peak oil should come as no surprise.

Q: Despite fact we've had a swift increase in prices of oil Saudi Arabia are cutting production, OPEC are supposed to keep supply even. What are motives of Saudi cutting production?

A: What happens in Saudi is behind a screen and we don't really know. But it looks as though Ghawar Saudi Arabia biggest oil field is crashing, we'll find out this year, as prices go up. Will the Saudis come forward with more to reduce these shortfalls? It's unlikely. The new fields they find and the reworking of current oil fields may moderate the crash, but we'll probably not see Saudi production rising. We may see some incremental bumps on the way down. We probably will never see production 12mbd ever again. If you look at future oil field of IEA to 2015, they are forecasting that demand will be met by future Saudi Arabia production and this is not going to happen

Q: David Strahan (author of The Last Oil Shock)

If Saudi price was involuntary and demand was pushing against it, surely the oil price would be a good bit higher and doesn't that moderate our confidence.

A: How prices happen is very arbitrary. We have run out of 26/40/50\$/barrel oil. But still have \$70 barrel oil. Soon we'll run out of that. Can't use price as an indicator as it a

much more complex.

Q: Crude impact film -like world caught in a giant eating disorder. consuming and leaving a mess behind.

A: Yeast consumes the grape juice which releases alcohol so the population of yeast explodes until it is consumed by the waste product. Are people smarter than yeast?

Q: James Hanson NASA scientist has been arguing we could afford to burn all of the remaining oil land gas and not go above a 2% increase in temp and its only coal we need to worry about t

A: We have to constrain all of our fossil fuels. The peak oil argument and the cc argument reinforce one another but we have no choice because these are non renewable resources and they are running out - 15 years for coal and 20 for natural gas to peak.

Even if we ignore the current climate imperative we can't ignore where we are. When nations a start to feel the economic pain the climate concerns will go out the window. most nations are going to think that keeping he electricity grid up even if that means burning coal then so be it. cc is going to go out the window it already has in the view of china and US. I can't imagine the leaders of the nation saying in order to protect future generations we will cut energy production. The depletion argument says that if you continue as we are you have problems. Cutting back is the only way. It may be painful but if you just continue as you are, we are going to have to worst-case scenario. [we need to find a way of] transposing to a Post oil scenario.

Q: Talking of depletion the meeting in Lampeter the issue of depletion came up and Monbiot estimated there were 300 years of coal left to burn.

A: I would point to 2 recent studies, one in Germany from the Energy Watch Group and another from the Netherlands. The Energy Watch Group study looked at most recent reserve reports from countries with coal. Most have downgraded their coal reserves by 30% (Mike says 90%). Most of those saying we have 150-300 years are based on old reports. looking at production ratios assumes we can continue using at the current level, that we have several decades left.

RDP ratios consider we can use same oil demand for the next few decades.???

In the real world production always takes a bell curve. Lots of coal in the ground but not all good quality.

Most likely global coal will peak in 15years, the other side of the peak high quality anthracite is low quality lignite, so because of that coal producers have gone after good quality stuff first. So the energy content of coal that has been mined [is much higher than the low quality energy we can get out of the coal left].

In USA even though the total mined coal is increasing, the quality and energy from it has declined for the last 8 years. China is largest coal consumer and is probably going to peak first, which will have drastic economic impacts for China.

The Future of Coal - report the European Commission from the Institute of energy says, The world could run out of economically recoverable reserves of coal much earlier than widely anticipated.

On paper it look like the world has much more reserves than it has actually got. South African coal looks robust - but the way they mine it means they take the best out but can't go back to get the rest. Often they become water flooded, the support networks crumble over time.

Chris Vernon critique on George Monbiot retracts.

Q: Is our government emphasis on reducing carbon footprint more about PO than CC?

I somehow think it's unlikely. Firstly "concern about climate is real our species may not survive this chemistry experiment we are doing with Mother Nature. (Mike wrote our atmosphere). No evidence to show that.

Q: How do you expect the economic period to evolve? Overnight the market will realise what the situation is and collapse, inflationary period and deflationary period?

All of those things are possible. Things could involve in two different ways. A deflationary period would be extremely negative for everyone. In the Depression money disappeared from the system. last time we had a deflationary period where money disappeared you could buy a great meal for 25c but nobody had 25c. The other way is inflation - more likely for the government. Whether that will be successful everyone is grappling with. I think the gov will try and inflate the economy to prevent a collapse, Richard Douthwait e of FEASTA has written about it.

Bernard Lighter in his book The Future of Money addresses these issues

Q: Peak coal is new to me - that seems to be a message that there are other ways to do it such as carbon capture.

A: We should be v skeptical about carbon capture technology. Experts testified before US senators and the question was of how soon it could be implemented. On a large scale Implementation is decades away. Clearly we don' have decades. Carbon sequestration is one of these schemes that coming up to distract us from cutting back on consumption of fossil fuel use.

It will increase energy cost and carbon cost at a time when society will be experiencing shortages.

The tendency will be to burn whatever we have to keep the lights on. This is going to be especially true in China. Even in short term its adding more co2 to the atmosphere.