



The ASPO-USA Conference - First Afternoon

Posted by [Heading Out](#) on October 8, 2010 - 10:48am

Topic: [Miscellaneous](#)

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One of the speakers commented, just at the beginning of the [ASPO 2010 Peak Oil Conference](#), that we would be subject to enough information that it would seem that we were standing under a fire hose. Well the Conference has had its first day, or at least afternoon, our first fire alarm (we got to the top of the stairs before being told it had been dealt with) and our first reception is over, as is the evening keynote session. He was right.

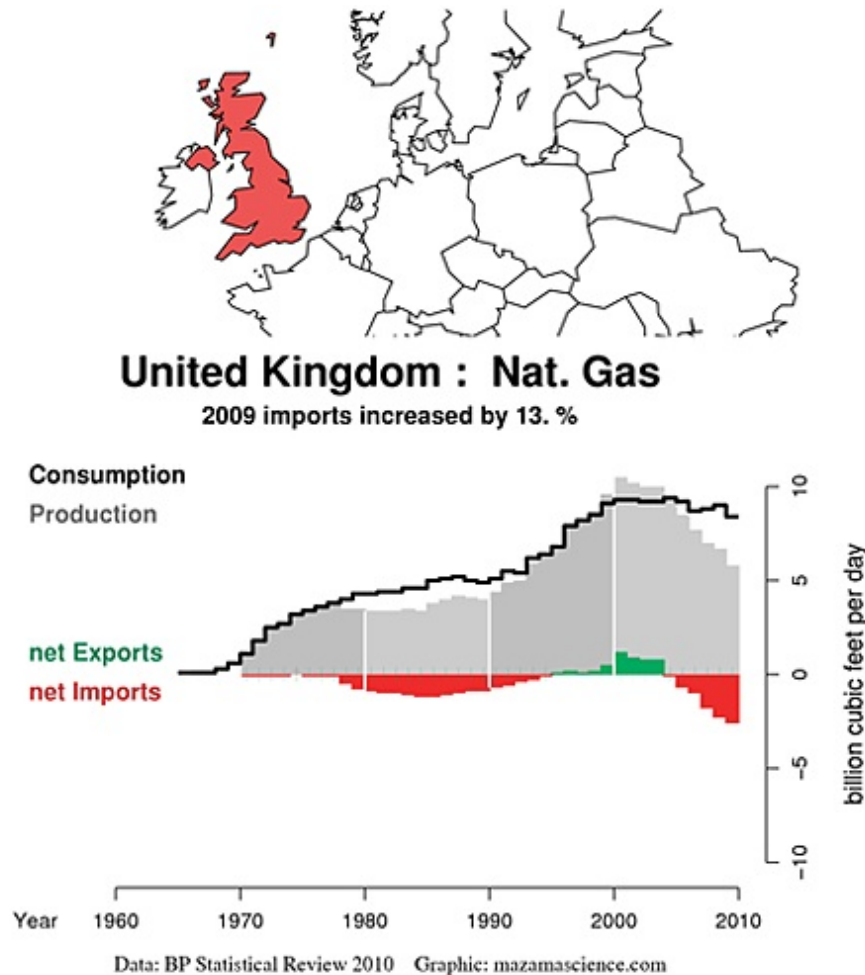
I occasionally think that attending Conferences should be a biennial practice, since change in the papers is so slow – but so far that hasn't been the case this year where the new information available is already evident, though some of the old lions are still roaring on the same topics. There were three concurrent sessions this afternoon, and so I can only report on one set – starting with the session on the Export Land Model (which just gets more worrisome); then the Oil Drum session (where I was a speaker) and then the session on Energy Alternatives (which mainly talked about EROI). This report is being written incrementally, and has been updated once, but I will add the evenings two sessions in a second post, given the length that this one has already.

[Jeff Brown](#) began the session on the outlook for exports. His Export Land Model is now well recognized within the community, and after paying a short tribute to the late Matt Simmons, always a friendly and helpful face at these meetings, he brought us more up to date on where the model predictions were being validated, and what they were showing. With lots of papers to cover I can only hit the very high points of the presentation, so this is a very short summary. After commenting on how production declines in major fields, he tied this in to the rising standards of the producing country, and showed that, in a base case a 5% decline post-peak production for a country's oil, when matched with a 2.5% growth in that country's consumption, driven by the oil, but continuing after it starts into decline, rapidly lowers exports. Simplistically within 3 years after peak the country will have exported half the oil it will export post-peak. He then compared this theoretical situation with the realities of Indonesia and the UK, where within 9 years for Indonesia, and 6 years for the UK, the countries stopped exports and became importers. Export declines in the final years were over 25% per year.

He pointed to the problems that Venezuela is seeing, and noted that consumption in Saudi Arabia is rising at 6.9% a year. He anticipates that Saudi Arabia, until recently the largest exporter (now behind Russia), will stop exporting before 2030. Looking at the top 5 exporting nations, who collectively supply 50% of the imported oil around the world, he anticipates that they will have shipped half of their remaining export volume in two years. There are now only 33 countries that produce more than 100,000 bd. And, for these, production is sensibly flat over the past five years, while consumption has risen from 16 to 17.5% of production.

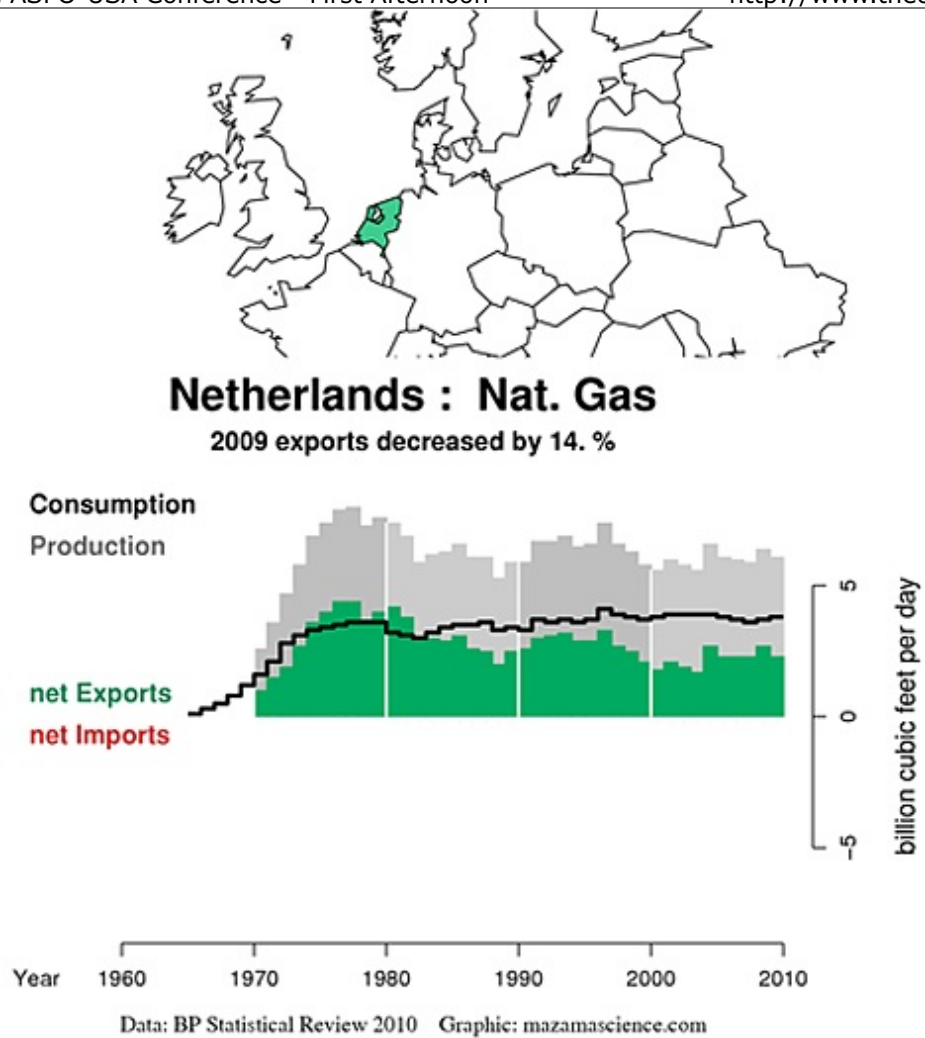
While unconventional oil is supposed to be a positive contributor in the future, he noted that when Canada and Venezuela are combined, production is actually falling. The worrying factor is the combination of China and India, who have increased imports from 11.3% of the total in 2005, to 17.1% in 2009. If this continues they will consume 25% of global oil exports by 2015, which will significantly reduce the amount available to the rest of us.

With the first speaker having raised the problem of oil, it was [Jonathan Callaghan](#) who shifted the topic over to Natural Gas. Jonathan runs the [websites on energy](#) that I use as a reference on occasion, where there are very useful plots of the energy consumption, production and import/export balances for the nations around the world. These provide patterns for the various fossil fuels, by nation, and Jonathan used representative plots from the series for his talk, beginning with the UK.

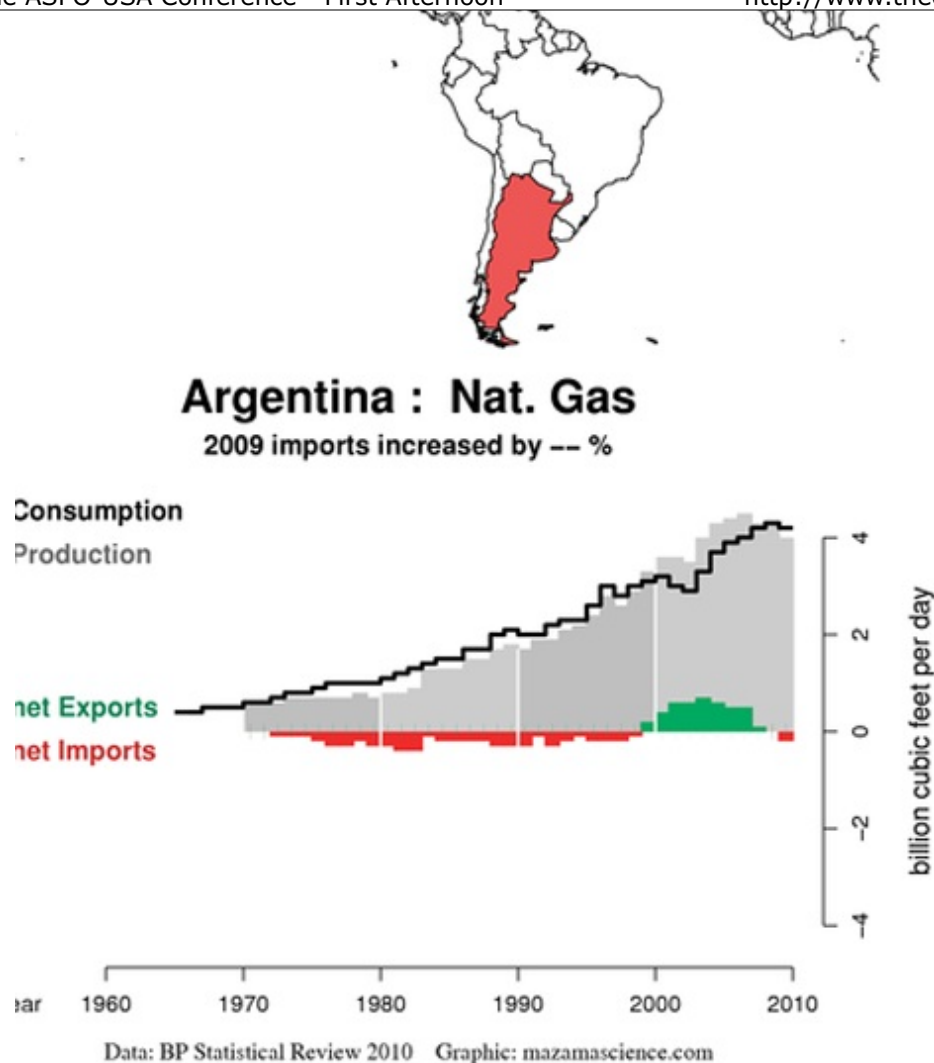


Noting that the UK used town gas (made from coal) until 1959, when the first LNG was imported from LA, gas in the UK was privatized in 1986 and reached peak production in 2000, becoming a net importer of natural gas in 2004. This last winter it was necessary, on three occasions for the National Grid to issue "[Gas Balancing Alerts](#)", where industrial consumers should reduce use to protect domestic consumers. The situation is anticipated to get worse.

He contrasted this way of managing a resource with that of the Dutch, who have the large [Groningen Gas field](#) but which they have managed in a much more conservative way. With their different management philosophy they have retained a considerable margin for the future, over the same time interval.



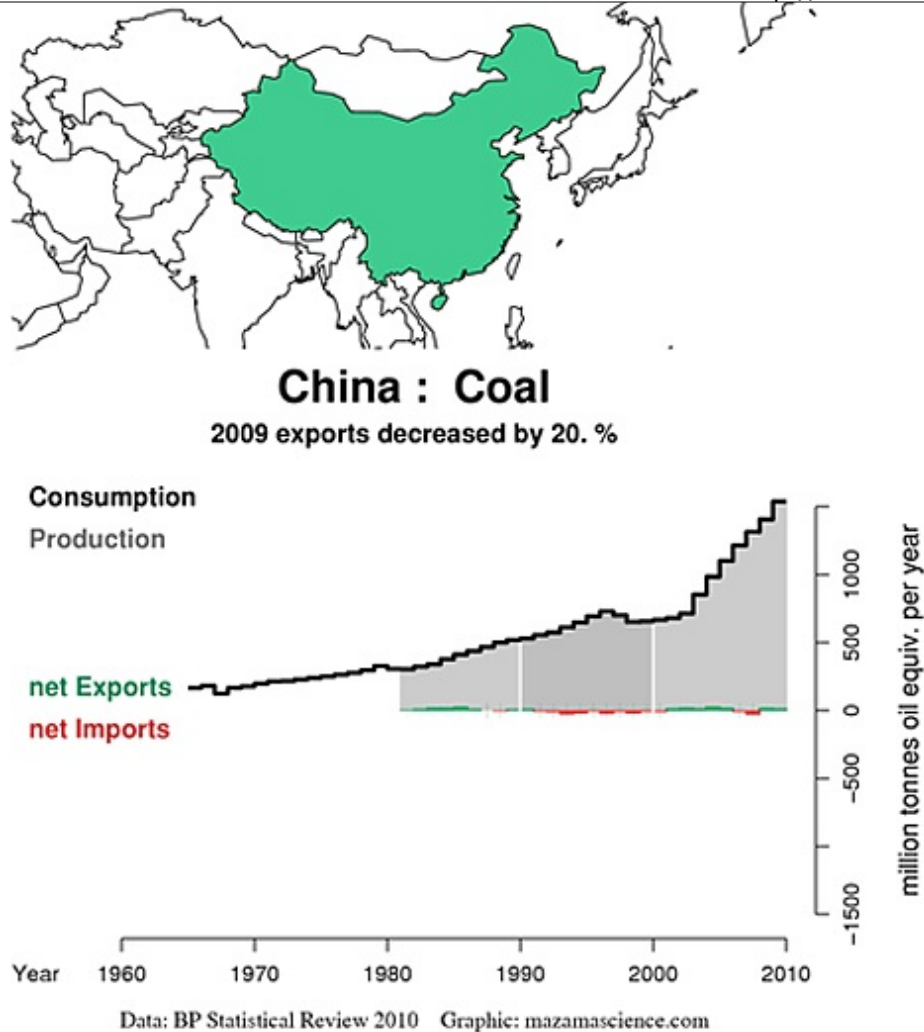
Presentation of the data in this way also allows judgments that are not otherwise immediately obvious. For example consider the data for Argentina:



Without looking at the export/import data it might be hard to decide whether it had peaked in production, but when that data is examined the conclusion is relatively obvious.

And thus he went through different countries showing how the analysis of the plots, with a little local knowledge, gives a global picture of what is going on. As South America moves to becoming an overall importer and China is adding compressors to the pipeline from Turkmenistan to increase the flow rates, the time before world production peaks may be considerably sooner than people realize, since most of the fields are being run on the British, rather than the Dutch model.

He then turned to coal, in what was really a second talk, looking at the amounts that are available (pressing the coal button [on the website](#)) allowed him to note how dominant China is becoming in coal consumption.



The problem, however, is while the condition of the industry is known in general, the behavior of China and India will likely govern overall future coal use in ways that we have yet to understand.

There was then a very short break, and the team from The Oil Drum took to the podium. [Gail Tverberg](#) began with introductory remarks explaining some of the factors, such as Geology, Technology, Economics and Timing that influence production and its impact on demand, and ability to respond to it. She noted the difficulty in justifying large investment for increasingly expensive reserves, and the problem in justifying the expense years in advance of production. Further when there are new crises, which could be created by one of several scenarios (including higher industry taxes) drops in production which can be relatively immediate cannot always be made up in that short a time interval. And sometimes those with the capacity might not be so inclined – particularly if the shortage drives up prices.

I spoke second and took as my theme that Technology, while it can come to the rescue on some occasions if needed (the horizontal well, slick fracture development of gas shales for example) requires considerable lead time and the solving of several technical problems if it is to succeed. Those solutions as has been stated in the Hirsch Report, can take 20-years to become a significant player. Thus while, for example, the “Green Hornet” flew with biofuel power this April, it used oil from [camelina](#), which is not a popular agricultural product in the US. I then pointed out (and I will expand this thought into a technical post, perhaps this Sunday) that those who anticipate Peak Coal in the next few years are likely going to be mistaken. The reason there has been no innovation in mining has not been because no one has thought of answers, rather that

what is used today is too cheap to need replacing.

[Dave Murphy](#) then gave a discussion on the changes needed to move away from the classical economics theories toward recognition of other factors in societal health. He noted that national economies are tied to the consumption of oil (which is then tied to price) rather than to oil price itself. The variation between expansion (up 2%) and recession (down 2%) is not great, though it is the provision of cheap fuel that has funded international growth. Every recession since 1970 has been preceded by an oil price spike.

We are now in an era where small fluctuations in flow (on the order of 1 – 2 mbd) can have a significant impact on price and economic stability. We are entering a period where the cost of production of oil begins to reach the point at which a recession is started, but the drop in demand in a recession would not justify the oil supply. And so this conundrum illustrates the world into which we are rapidly entering.

As the production of energy requires complex drilling platforms that rent for \$450,000 a day (of the Deepwater Horizon ilk) rather than the wooden platforms used to drill [Spindletop](#), those costs will only continue to rise.

With so much uncertainty it is, perhaps time to change economic models, from the neoclassical to bio-environmental. He noted that studies have shown that emotional happiness increases only until a person earns \$75,000 a year. Above that there is no increase, and so perhaps we should be content when we reach this level, and stop the perpetual growth cycle.

The session closed with a talk by [Jeff Vail](#), who talked of the “Rescuing of Suburbia.” Much has been written about the trouble that those communities are in, but does it really need rescue? Of the 150 million Americans living in the 40 million homes in Suburbia, how many would have the money to relocate and where? There are 5 million homes at risk of, or in foreclosure. Those 5 million homes in foreclosure are a big problem already-how could one afford to abandon the 40 million homes in Suburbia?

Commuting costs are a real problem, but this is a low hanging fruit. But to save energy and cost, one must accept inconvenience. (The Admiral later in the evening talked of going to a child’s game and seeing all the neighbors there in there SUVs , all having driven separately an hour and forty-five minutes to get to the game, and the same back.) He talked of making other decisions, citing [Brad Lancaster in Tucson](#) who harvested rainwater to grow food to feed 50% of the needs for a family of four on what started as a barren lot. The open spaces also allow more effective installations of solar power.

The transition however must go beyond that, if we are to re-invent suburbia – and there are tools in development. For example, rapid prototyping equipment and early machines that can make 3-D objects from computer programs is in development. This will allow small-scale manufacturing and construction, and distributed manufacturing decentralizing the process and empowering suburbia. Suburbia, it must be remembered, has need the greatest egalitarian land ownership movement in history. Unfortunately the transition, without significant help, will not happen fast enough.

We then took the break in which I started this post. I’ll write on what came next in a second post.



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