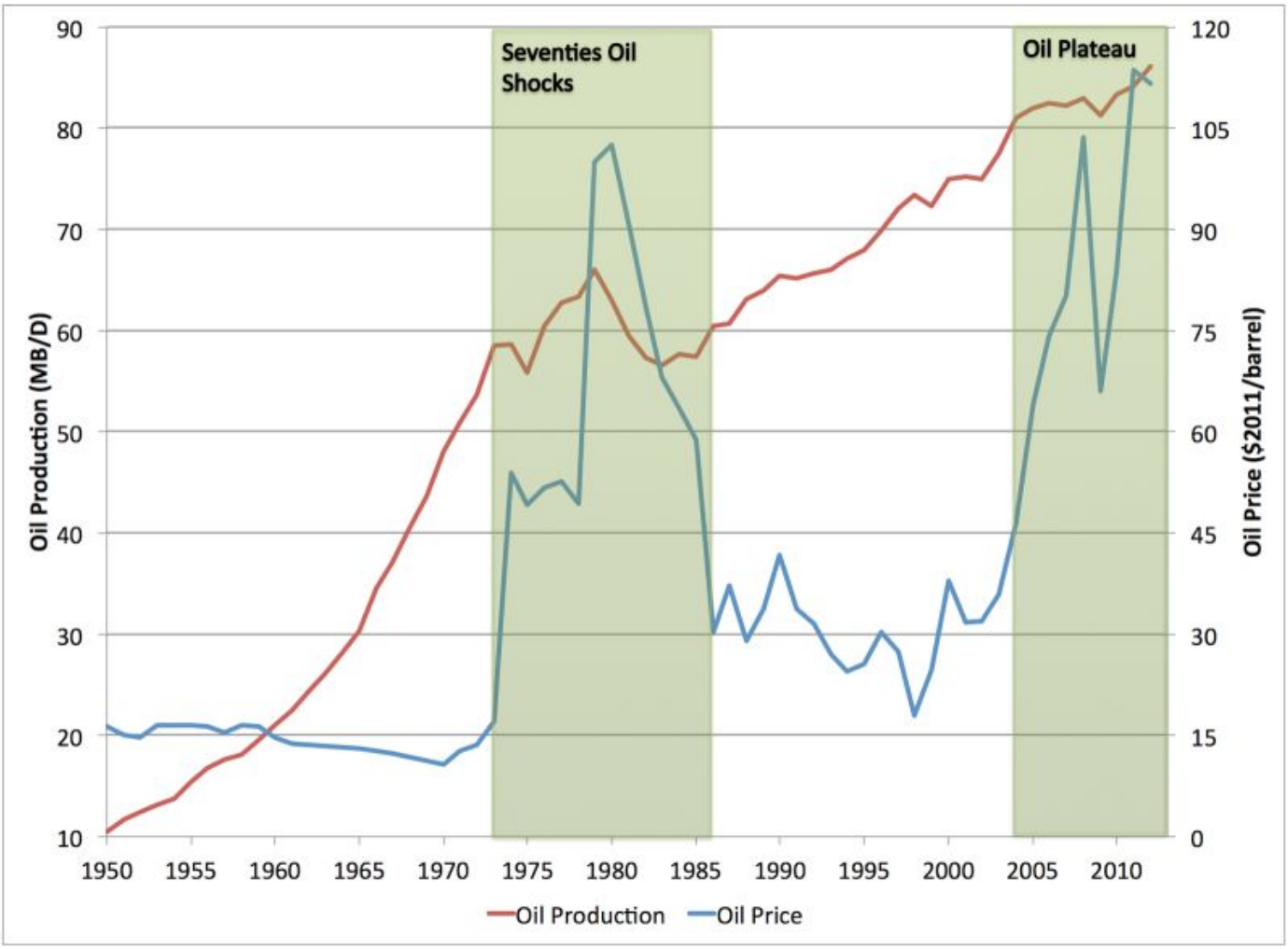
The Oil Drum
DISCUSSIONS ABOUT ENERGY AND OUR FUTURE

What The Oil Drum Meant

Posted by Stuart Staniford on August 28, 2013 - 8:43pm



The popular peak oil blog The Oil Drum (TOD) began in early 2005. I joined as a contributor in mid 2005, later becoming an editor, and I left the site in early 2008. TOD continued in the meantime, at least up until now when the current editors have decided to transition to an archival format. They don't feel the quality and quantity of post submissions justify continuing. They asked a number of us old-timers to comment on the significance of TOD, and these are my reflections.

I start with the chart above. It shows, from 1950-2012, world oil production annually (red curve, left scale), and real oil prices annually (blue curve, right scale). I show in green boxes two regions of major disruption, and between them two regions of relatively calm behavior (in white).

The orderly region from 1950 to 1973 was characterized by very rapid growth in oil production that was achieved at very modest oil prices (around $20/barrel in 2011 dollars).

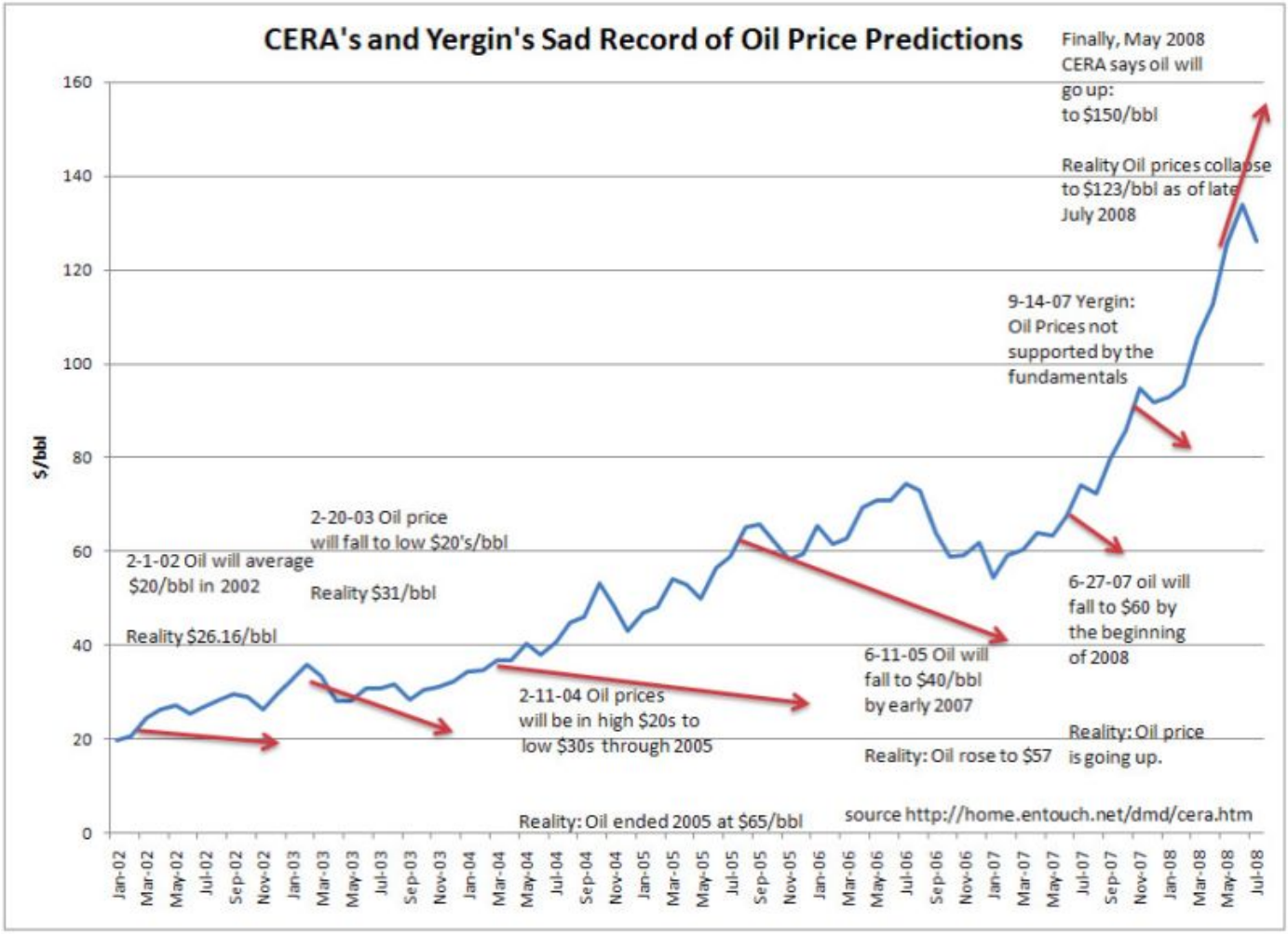
Then in 1973 came the Arab oil embargo, followed in 1979 by the Iranian revolution and then the Iraq-Iran war. These events caused a series of sharp but relatively short-lived contractions in the global oil supply. The result was huge price increases, and a permanent change in the way the world used oil.

After the dust settled in the mid eighties, oil production resumed growing fairly steadily, but never again at the frenetic pace of before the seventies - from now on society was more concerned with fuel efficiency and grew oil consumption more slowly. Prices fell into the $30 range, and remained there, give or take, for the next couple of decades. This was the second period of stability in the oil markets since WWII.

Then, in late 2004, global oil production largely stopped growing and entered a rough plateau. Prices began to shoot up, reaching well over $100/barrel within a few years, and largely staying there to this day (making allowance for a sharp downward fluctuation during the great recession).

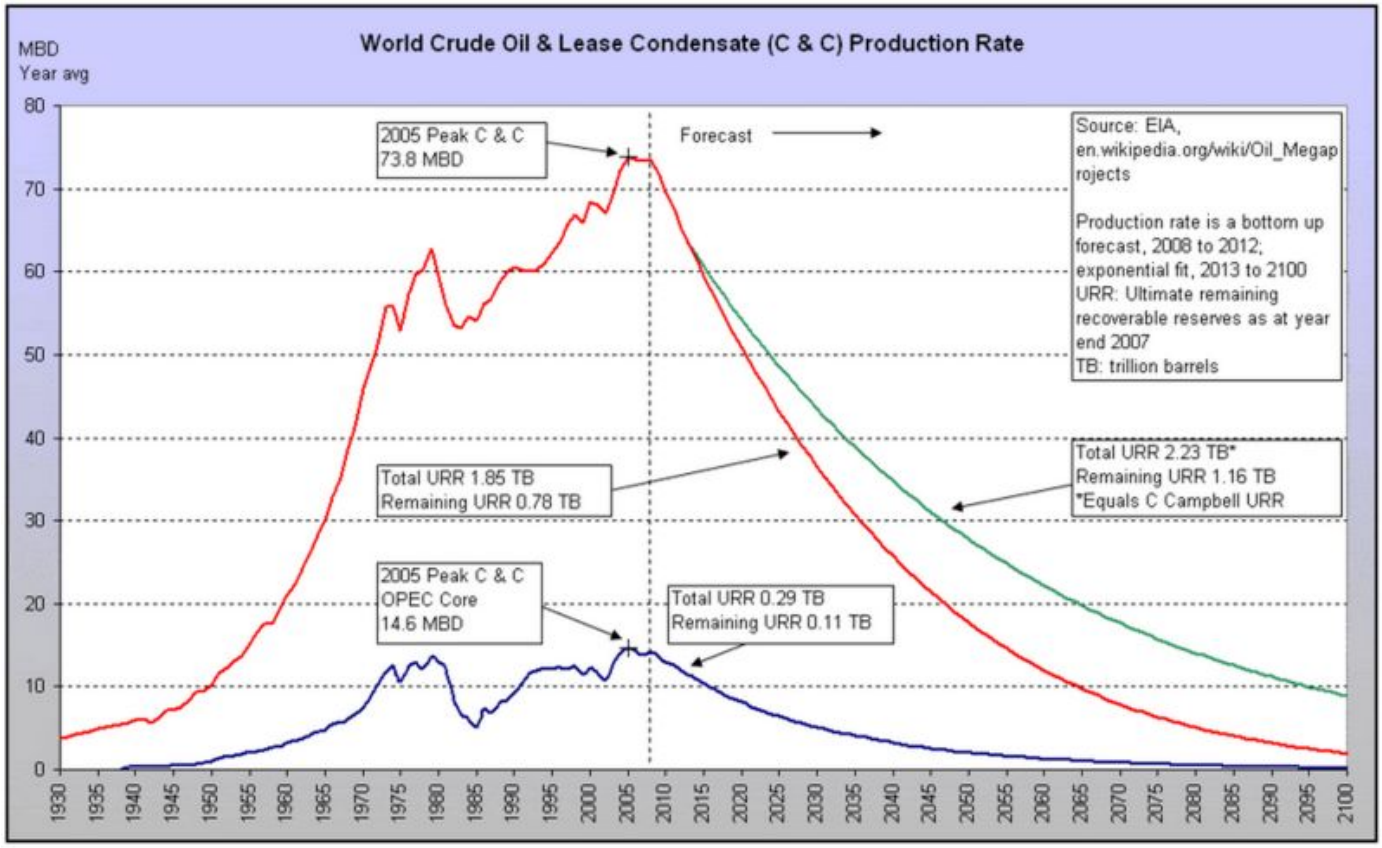
There sprang up a large debate about the meaning of these events. The Oil Drum in particular I believe came to function as a central node in this debate, and one of the best places to hear a range of views that were based on a close analysis of the available data. The reason TOD is now coming to a close is that the need for this particular debate is over, at least for the time being. The data have spoken.

One extreme in this debate was what came to be known as cornucopians, epitomized by Daniel Yergin of the consultancy CERA. He made a long series of predictions that oil production would resume growing and prices would fall any day now. This was most famously satirized in a graph by Glenn Morton:



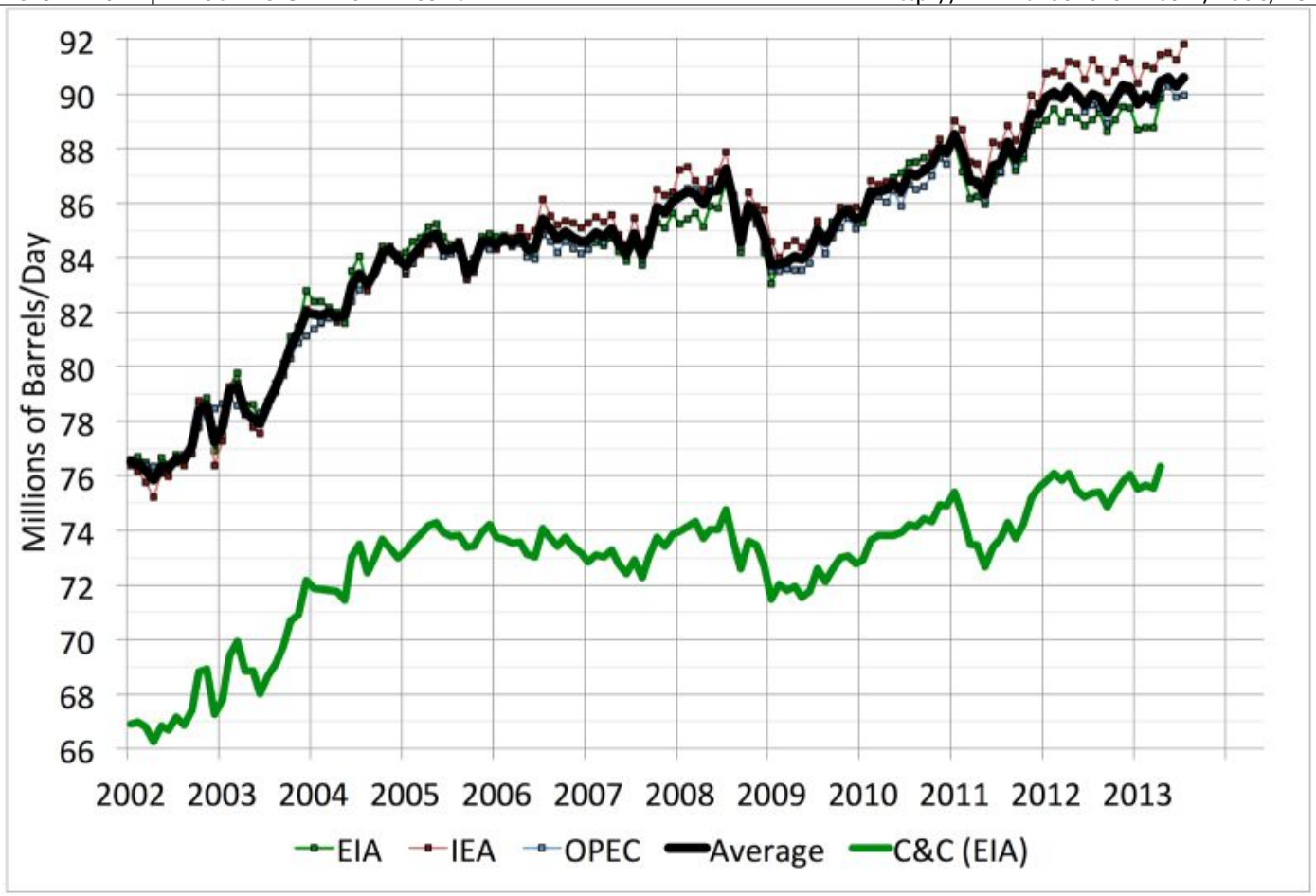
Obviously, this didn't happen. Oil production has not risen rapidly, and prices have not returned anywhere close to the pre-2004 idea of normal.

Another extreme in the debate were "doomers" who believed that global oil production would begin to fall very rapidly, very soon, because peak oil was upon us. "We're all gonna die" was the logical implication. One such forecaster was TOD contributor Ace who produced a series of forecasts like this one which showed oil production beginning a precipitous decline as of the date of the forecast:



The same piece forecast oil prices to rise rapidly and steadily and pass $200/barrel by the end of 2012. That didn't happen either.

I'm not sure anyone predicted the last eight years perfectly (including me). Still, on the whole, the various "moderates" in the debate came closest. What has actually occurred can best be seen in this graph which shows monthly oil production from a variety of data sources from 2002 onward:



The green curve is the EIA's estimate of the production of "crude and condensate" - C&C - which is a fairly narrow definition of oil that largely measures liquid hydrocarbons that flow out of the ground. The other curves show various estimates of "all liquids", which adds things like biofuels and "natural gas liquids" - compounds like propane and butane removed from natural gas production. These aren't really oil, but can substitute for it to varying degrees and so are often counted with it.

The crude-and-condensate curve is bumpy, but does slope upward slightly. The all liquids curve slopes up more, reflecting the fact that global natural gas production has increased steadily. High oil prices and government policies also induced a biofuel boom after 2005.

Thus we seem to live in a world in which, although traditional sources of oil are declining in many places, high oil prices (around $100-$120) are able to bring out enough low quality sources of hydrocarbon to offset this decline and just a bit more. Examples include oil fracced from very tight rocks in North Dakota, and tar sands production in Canada. These sources are difficult enough to bring on line that prices have not crashed, but are sufficient to prevent global oil production from actually declining. Clearly, we have not passed peak oil yet, and it's not at all clear when we will.

In the meantime, the situation has gotten quite dull. I compile graphs of oil production every month, and it's gotten somewhat akin to watching paint dry; every month, it's pretty much flat, and I tire of saying the same things over and over again.

On the other hand, we certainly don't live in the pre-2004 world any more. Oil prices are high, and there seems little prospect that they will ever fall below $100/barrel for any sustained period. If for no other reason, Saudi Arabia needs an oil price somewhere around there to balance its budget, and they are always in a position to force the price to stay above that threshold by

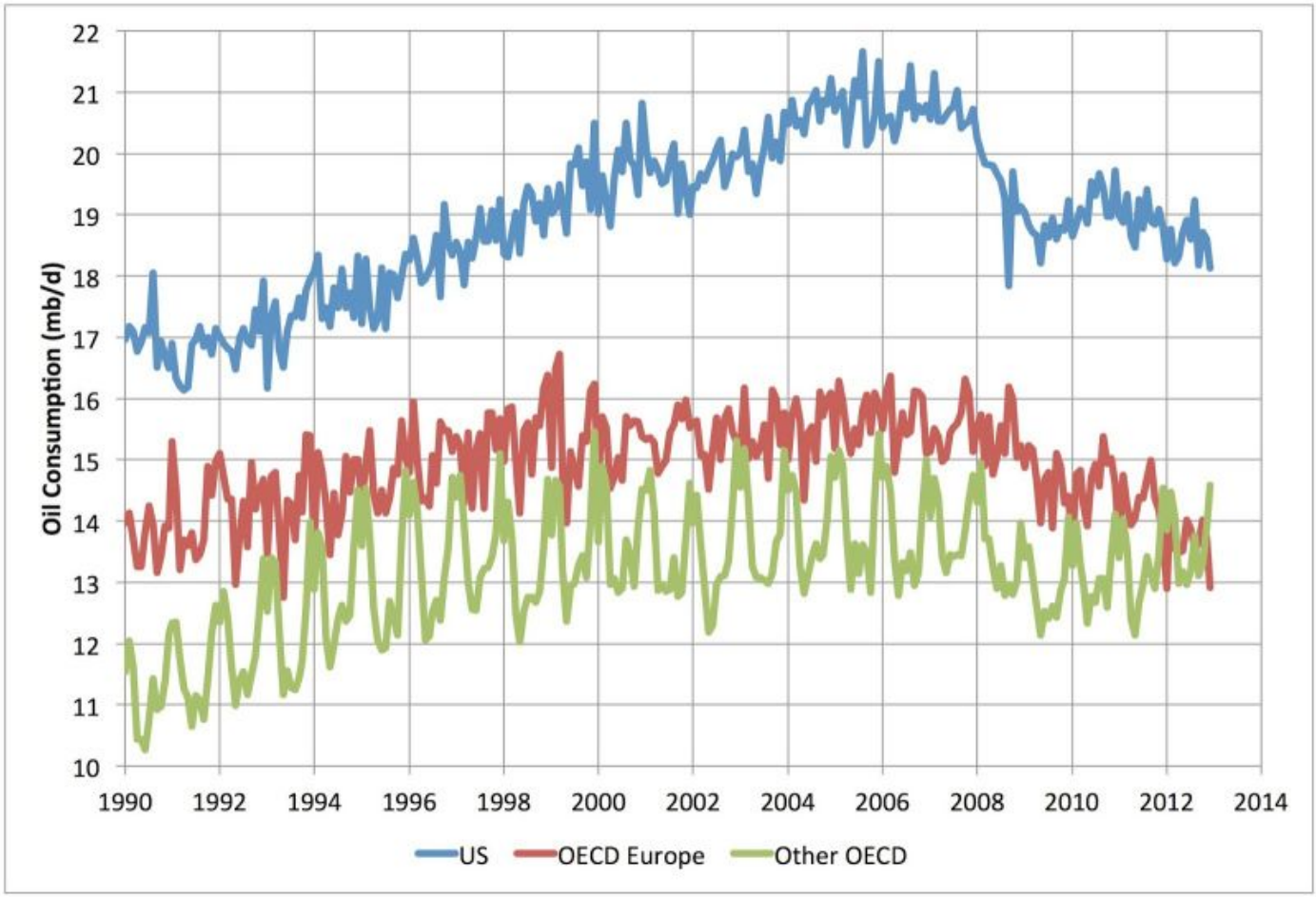
modest decreases in their production.

Furthermore, the situation remains very vulnerable to disruption. Whereas in the eighties and nineties there was large amounts of spare capacity in oil production, nowadays there is little, and perhaps almost none. Any disruption in any sizeable oil producer will cause a large price spike - as we saw in 2011 when a revolution in Libya, which produced less than 2% of the world's oil, caused a sizeable price spike.

As I write, Libya, Tunisia, Egypt, Syria, Lebanon, Iraq, and Iran are all subject to varying degrees of economic and political turmoil. We in the west are apparently about to bomb the Syrian government, as an interesting experiment to see what that does to the stability of the Middle East.

I assume at some point a large oil producer will descend into turmoil and then there will be a large price spike, and that may kick the global oil market out of the current meta-stable state. However, there is no telling when that might happen. In the mean time, oil production slowly creeps upward, and oil prices are around $100-$120.

One final point worth making: while global oil production has not peaked, oil consumption by the developed OECD countries almost certainly has. Since China, India, the Middle East, etc are all growing their consumption rapidly, and global supply is almost stagnant, OECD consumption must decline, and it has been:



I do not expect OECD consumption of oil to surpass its 2005 peak.