

The Current Energy Situation—A Global Perspective

by
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(This article is dedicated to the memory of Karl Davies, who recognized the importance of spare capacity before anyone else.)

Nobody can accurately predict when we will pass the peak in global oil production. We can make educated guesses based on computer models, production profiles and the exploration record. But they are guesses, and any reputable scientist would qualify them with phrases such as, “it appears that,” or “our model indicates,” or better yet “there is an 80% chance that....” Anyone who tries to tell you that we are passing peak production right now is not a scientist, but a soothsayer.

The reason for this is that the actual peak of production can only be determined with hindsight. You must be able to compare data for several years before you can determine whether production is really declining, and whether that decline is a temporary phenomena. This cannot be seen clearly with a year to year comparison. You need several years of production data to see the overall trend. If production is down for two straight years, then the probability that oil is past peak production becomes much more likely. And if the pattern continues downward for three or four years, then you can say with growing certainty that production peaked three or four years ago.

This being said, it does not appear that global oil production has passed its peak yet, though it is drawing near. How can this be when oil prices are shooting up to record highs? Prices are not a good indication of production; they are subject to speculation, and any number of other influences. Then what is happening right now?

As production approaches its peak, its ability to increase is strained. If demand continues to grow, production may not be able to keep up with it, even though it has not begun to decline. And that is what we are seeing right now.

Demand in the US is continuing to grow as a function of the US economy feeding on consumer debt. And worldwide, demand is surging as the world’s most populous nations, China and India, reach for the American way of life. In 2004, China bypassed Japan as the number two oil consumer in the world, behind the U.S. And China is followed closely by the second and third most populated countries: India and Indonesia. The planet cannot sustain our current levels of consumption, but as the rest of the world strives to “Americanize” production simply cannot keep up with demand.

There is very little spare capacity left in global oil production. All the big fields in the world are aging, and most have already passed peak. Nor has there been another major oil discovery in several years. The Caspian Sea region proved to hold less oil than was hoped, and that which it did contain was sour with sulfur and heavy metals. The Saudis claim that they can raise production by 1 million barrels per day, but it is doubtful that they can maintain this increase for long. Energy investment banker Matthew Simmons has analyzed a mountain of data on the Saudi oil fields. His conclusion is that the major Saudi fields have already peaked and may be poised to collapse due to overproduction and other damaging practices. This leaves Iraq as the only nation with any real spare capacity.

Prior to the U.S. invasion, Iraqi oil infrastructure was ready to collapse due to over a decade of sanctions. And the Iraqis were damaging their oil fields in their efforts to produce what oil they could. In 2001, independent reports came out announcing that without increased access to spare parts, repairs and new technology, Iraqi oil fields could be damaged permanently. Pressure was building to ease or remove the sanctions. French, Russian and Chinese oil industries had major contracts to repair and update the oil infrastructure. These contracts were held up by the sanctions and have since been negated by the U.S. invasion.

Now it remains uncertain when Iraqi production will return to the level it was at prior to the U.S.

occupation. A country embroiled in terrorist resistance and civil war will have difficulty maintaining oil exports, much less increasing them.

Worldwide, oil production is so close to capacity that any disruption, whether from a war or a natural disaster, will be reflected in the price of oil. Oil infrastructure throughout the world is strained, especially within the United States.

Few companies are interested in investing millions of dollars in new refineries or new transport tankers if they feel it is doubtful that they will make back their investment. And so we are left with an infrastructure which is inadequate to keep up with growing demand. This leads to breakdowns and bottlenecks, and all such incidents are reflected in the price of oil.

Finally, the price of oil is driven up by speculation itself, seizing on any rumor of supply disruption to drive up the price of oil. Some shrewd investors are making millions from the current market climate, as Exxon-Mobile admitted when they posted the largest profits by any corporation ever. The fact is, even with all the numerous disruptions, oil prices should not be where they are right now. Certain players are raking in the profits, while the rest of us are left unprepared when the world actually does pass peak oil production. Instead of allowing a few greedy individuals to stuff their pockets, we should be using those profits to prepare for the age of declining oil production.

Although it is doubtful that global oil production has passed its peak yet, there are numerous indications that it is about to do so. Most notably, all of the major oil companies (who operate outside of OPEC) are reporting declining production. This indicates that the world outside of OPEC is past its peak. In addition, OPEC issued a report examining world oil production by weight and sulfur content. In the trade lingo light oil is much preferable to heavy oil, and sweet oil (low in sulfur) is far better than sour oil (high in sulfur). OPEC's analysis indicates that from 2000 to 2004, the world production of light, sweet crude declined by over 2 million barrels per day.

These two items alone clearly indicate that we will soon pass the peak in world oil production. Once we have done so, we will be treading into new territory for which there is no parallel in the history of humankind. The odds are that it will be a troubled period, even more so because we are approaching it totally unprepared. It seems that the old Chinese curse is very apt: we are living in interesting times.