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Has oil hit its peak?

Last year saw crude prices hit record levels, as well as estimates that production could soon plateau. Guy Wilson-Roberts looks at the price and supply peaks and reviews the predictions for 2008.

In 2007, oil prices surged to record levels. On January 3, when NYMEX trading opened, WTI crude closed at \$58.32 per barrel. On November 23 it hit its record closing price for the year: \$98.18, an increase of nearly 70%.

Bunker prices followed close behind. In January, key grade IFO380 was below \$300 per metric tonne (pmt) in Singapore and below \$250 pmt in Rotterdam. In November, both ports saw prices peak over \$500 pmt.

The massive rise in oil prices touched off a stormy debate between producers and buyers.

The Organization of Petroleum Exporting Countries (OPEC), responsible for around 38% of world production, pointed the blame squarely at market speculation.

"The oil market fundamentals are sound," OPEC president and UAE minister of energy, Mohamed Al Hamli, told the OPEC conference in December.

"In spite of all these positive factors, the market continues to

be affected by price volatility," he concluded. "This is mainly due to increased speculation, which has detached prices from fundamentals."

This view was also put forward by OPEC's secretary general, Abdalla El-Badri, in November as oil approached record highs.

"Right now it is funds and speculators who invest in oil - and financial markets interfere with the oil market," El-Badri was reported saying. "Oil is driven by speculation and has become a financial investment - that leads to exaggerated prices."

Market analysts agreed, to a degree, that there were financial factors at play on futures markets, with a global credit squeeze making energy futures a better investment than equities and bonds.

Demand growth outpacing supply

But warnings were raised by monitoring agencies that the fundamentals were not quite in balance.

In its assessment for 2008, the US Energy Information Administration (EIA), part of the Department of Energy, saw several factors as underpinning high oil prices.

"The oil balance outlook remains characterised by rising consumption, modest growth in non-OPEC supply, fairly low surplus capacity, and continuing risks of supply disruptions in a number of major producing nations," the agency said.

The EIA expected that world consumption in 2007 would total 85.86 million barrels-per-day (m/bpd), and actually exceed production of 84.81 m/bpd meaning that inventories of crude would have to be drawn down.

So the debate turned to future levels of supply and demand, and the impact of this balance on price levels.

OPEC has said that world oil demand in 2007 was 85.74 m/bpd and it expected demand to grow by around 1.4 m/bpd to 87.1

m/bpd this year. The EIA has estimated that actual consumption in 2008 will likely rise by 1.6 m/bpd, although supply will increase by a greater rate - taking pressure off prices.

For the next two years, the agency has predicted that surplus production capacity will increase from its current level of under 2 m/bpd to over 4 m/bpd by the end of 2009. Presuming that the producing countries keep pumping, there should be plenty of oil.

With oil production closing in on 90 m/bpd in the next few years, an ongoing debate has been revitalised. Indeed, 90 m/bpd is not the projected ceiling for oil demand or supply: the EIA has projected that consumption will be 97 m/bpd by 2015 and 118 m/bpd in 2030.

The Paris-based energy watchdog, the International Energy Agency (IEA) has predicted production levels at between 102-120 m/bpd by 2030.

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Are oil production limits now the reality?

2007/2008 REVIEW

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The return of peak oil

Which is why, at the end of last year, it became fashionable to talk about 'peak oil' again.

Nothing seems to polarise oil market commentators like a discussion of peak oil, first started by Marion King Hubbert (who gave his name to Hubbert peak theory) when he accurately predicted the peak of oil production in the US in 1970.

Since then, numerous analysts have put dates on the peak for world production. In a survey of theories, the US General Accountability Office (GAO) in February last year found that "most studies estimate that oil production will peak sometime between now and 2040".

Scaremongering by some over a peak in oil production, and then its decline, has been rejected by others.

"There is plenty of oil in the tank," wrote David Smith in the Sunday Times in the UK in December. "Production is constrained not by geology but by politics."

Elsewhere, in the Korea Times, state-run oil company the Korea National Oil Company said that the idea that oil would run out in 40 years was simply "nonsense - almost comedic."

But in many cases, the protagonists in the debate are talking past each other, with some peak oil proponents simply saying that production levels will peak, not that oil will necessarily run out any time soon.

Those proponents have received support for their case by



what might be considered unlikely quarters, the oil companies themselves.

In October last year, the head of French company Total, Christophe de Margerie, told a conference in London that even 100 million barrels of output by 2030 would be difficult.

It was "the view of those who like to speak clearly, honestly, and [are] not just trying to please people," he was reported saying.

The CEO of ConocoPhillips, Jim Mulva, also suggested the same peak.

"I don't think we're going to see supply go over 100 million barrels per day," he reportedly told a conference in November last year.

Mulva explained that, with changing supply patterns, it was

necessary to add new production just to maintain current figures.

"If we're going to stay with 86 million barrels per day, we've got to be out there adding 6 or 7 million just to stay flat," he said. "When you see Saudi Arabia saying they're going to go to 12 million to 12.5 million [according to OPEC, Saudi Arabia produced 8.9 m/bpd in November 2007] and maybe up to 15 million - how is this going to happen?"

At the Association for the Study of Peak Oil summit last year, other industry insiders were equally unequivocal.

"We can't continue to make supply meet demand much longer," former US energy secretary James Schlesinger was reported saying. "It's no longer the case

that we have a few voices crying in the wilderness. The battle is over. The peakists have won."

"Today I believe is the end of cheap energy," said Lord Ron Oxburgh, the former chair of Shell. "It's essential that we move away from fossil fuels as fast as possible. The boat is sinking and we have to do everything we can to plug the hole."

Limits on production

The problem is not so much the total quantity of oil available, but that - according to some - access to oil fields will be increasingly difficult for a variety of reasons. Costs for exploration and exploitation are increasing, oil-field geology becoming more difficult, and there are skill shortages across the industry.

The former head of Saudi Arabia's oil production has joined this view, and has said publicly that there were not enough engineers and equipment to keep production increases going, and that new fields were tending to be smaller and more complex to develop.

"We know that the world is not running out of energy resources," the US deputy secretary of energy Clay Sell was reported saying. "But nonetheless, above-ground risks like resources nationalism, limited access and infrastructure constraints may make it feel like peak oil just the same, by limiting production to something far less than what is required."

Canada's oil sands have been cited as the classic example of reserves that are difficult to access.

Canada now has the second largest oil reserves in the world, behind Saudi Arabia, but this change has only come about in the last decade as the oil sands have become accessible. The total volume is estimated at nearly 180 billion barrels of oil, but sources have pointed out that current production is only around 1.1

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m/bpd, expected to reach only 3 m/bpd by 2015.

Other countries also face difficulties. Mexico, for example, has recently discovered new offshore reserves, but accessing them may be difficult and require upwards of \$15 billion investment over the next 15 years, according to the EIA, because of the deep drilling required.

As a result, and due to declining reserves in other fields, the EIA estimates that Mexico's oil production will decline over the next three years despite these new discoveries.

Instability in some producer countries is also an issue, with around 15% of Nigeria's production estimated to be out of action due to political violence in oil regions.

What is clear is that supply patterns for crude oil are changing, with either a handful of key countries like Saudi Arabia providing production increases or other countries coming onboard.

Many countries have declining reserves. The EIA measures reserve-to-production ratios, the number of years that production can be sustained at current levels based on known reserves. For some countries, like Iran, Kuwait, and Venezuela, there is around 100 years of oil to be pumped at current rates.

For others, there are already limits and plateaus on production - like Norway (9 years), the US (11 years), or Indonesia (12 years).

Which is why other analysts have spoken out in support of Jim Mulva's proposed peak figure, and suggested that the

peak will come within the next decade.

"The real crisis will come around 100 million barrels a day, in the next decade," Mike Rodgers of consultants PFC Energy told the Guardian newspaper last year.

What now for prices?

In the shorter term, though, the key question is where oil prices will go in 2008.

As the EIA has suggested, "fairly low surplus capacity" will be a major factor in the supply and demand balance, which has sparked further debate over whether OPEC can open the taps further to take the pressure off prices.

Demand in 2008 is expected by different sources to rise between 1.3-1.6 m/bpd. OPEC expects non-OPEC supply to grow by 1.1 m/bpd. The EIA has suggested, however, that non-OPEC production capacity growth will be 0.9 m/bpd.

With the range of uncertainty around possible growth in demand, and non-OPEC supply, OPEC has forecast that there could be less demand for its product this year - or greater demand by up to 2 m/bpd.

If demand were to fall, that would be good news for OPEC's already strained production levels.

"Most members are currently producing at full capacity," Mohammed Al Khatabi from the National Iranian Oil Company was reported saying recently.

The cartel has pegged its own surplus capacity at 3 m/bpd, a reasonable cushion for the range of anticipated demand. The EIA has estimated it to be about half that figure, so OPEC could be under pressure.

Most of OPEC's increase in production, should it be required, would supposedly come from Saudi Arabia, although its supposed surplus capacity of 2.3 m/bpd has been questioned by both the EIA and the IEA.

Doubts on how long the country could raise its capacity for have been raised by producer Saudi Aramco itself.

"The spare capacity they say they have is all there, so bringing it on line is not a problem," a former company senior official reportedly said. "The question is how long can you sustain it."

So where does that leave prices?

The EIA has estimated that crude prices will average \$87 per barrel in 2008 (and \$82 in 2009).

Merill Lynch was conservative, and in December put 2008 prices at an average of \$82 per barrel.

Others have predicted higher price levels.

Goldman Sachs, famous for predicting the \$100 price spike, raised its estimate late last year to an average of \$95.

The Centre for Global Energy Studies in London was also not to far off this price level, and has forecast \$90 for the first half of the year, with the possibility of a spike to \$100 per barrel.

"There are conditions in which we would see well over \$100 [prices]," one of its analysts was reported saying.

There were also predictions, however, that lower demand growth could keep prices from going over the \$100 level.

"The global economy is weak - and that's

going to be the worry that potentially keeps you from 100 dollars," PFC Energy's David Kirsch told AFP in January.

But whether crude prices are eighty-two dollars or one-hundred and two dollars, bunker prices are likely to be significantly affected by oil price levels if they are higher overall than in 2007.

On September 13 last year, for example, when WTI crude closed at just over \$80 per barrel in New York for the first time, IFO380 in Rotterdam was \$372 pmt and in Singapore was \$388 pmt.

When crude closed at a few cents over \$90 per barrel on 25 October, prices for the grade were \$444 and \$472 pmt respectively.

Just two weeks later, IFO380 prices hit their all-time records in both ports: \$506 pmt in Rotterdam and \$514 pmt in Singapore, according to Bunkerworld price information. On the NYMEX that day, crude closed at \$96 per barrel.

Those record prices for 2007 - also all-time records - contrasted with the high prices recorded in 2006: \$337 pmt in Rotterdam and \$360 in Singapore, so peak prices in 2007 were up 42-50% over the previous year.

Local supply and demand factors in bunker markets in different ports are always important, but the correlation between oil prices and bunker prices is strong. If the price of crude oil remains around the level in 2008 seen in the latter part of 2007, bunker prices will also be at those levels - a far cry from the prices seen only as recently as a year ago, which even then were regarded as historically high. ■

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