

# Could the price of crude oil drop to \$40/barrel?

While the industry seems to have accepted high oil and fuel prices as a permanent characteristic, one noted industry economist explains why he feels that current high crude oil prices are unsustainable and bound to decline over the next few years.

Flying in the face of conventional wisdom, Adam Pilarski, senior vice president at Avitas makes the prediction that by 2018 the price of crude oil is likely to have fallen from the current level of \$100 per barrel, to as low as \$40. “There is basically no rational reason why oil prices are as high as they are, or should remain as high as they are. The bubble of rising oil prices over the past five or six years should burst at some point during the next six years or so,” claims Pilarski.

The core to this reasoning is that oil prices are influenced by political and non-economic factors that are related to uncertainty and levels of production, not by levels of demand and consumption. “Prices are unlikely to remain high for too much longer because there are three main effects of the price of crude remaining high for a sustained period,” continues Pilarski. “The first is that consumers of oil learn how to use less and be more efficient with oil. There are many myths, for example, of China’s high rate of economic growth resulting in a steady increase in the demand for oil. In fact China’s consumption has grown at a far lower rate than its economy. The

second is that with sustained high oil prices users find alternative energy sources, and once developed they cannot be uninvented. Many alternatives, such as biofuels, are already being researched and developed due to concerns over climate change. The third is that some oil suppliers will increase their levels of production if prices remain high.”

There have been numerous predictions that the world’s oil reserves will get exhausted. The predictions of how many years of remaining supply have varied wildly, while in parallel new supplies have continued to be found.

The first issue that Pilarski deals with is quashing the often held view that rises in crude oil prices are the result of increased demand and economic growth. Pilarski gives several examples that contradict this reasoning. World gross domestic product (GDP) rose by about 15% from 2005 to 2011, while world oil consumption only increased by 0.5% over the same period. Another is that China’s gross domestic product (GDP) climbed by 86% during the same period, while its consumption increased at a lower rate of 54%. In the meantime, other countries reduced their

consumption with the effect of moderating the overall global consumption increase. Taking into account this small increase in global oil consumption, the price of crude oil climbed by 77% from 2005 to 2011.

A third example is the air transport industry itself, which saw global traffic grow by 53% from 2000 to 2011, while demand for jet fuel only grew by 3% because the industry used more fuel-efficient types and accepted higher passenger load factors to limit consumption increases. Crude oil prices more than trebled over the same period, however. This at least clearly illustrates the point that air transport is not responsible for the rise of crude oil prices.

“The production of oil and its supply is one main reason behind fluctuations in the price of crude oil,” says Pilarski. “Prices have fluctuated wildly, while demand does not. Production levels have fluctuated, however, although not as wildly as prices. This raises the other factor influencing crude oil prices: global political events. This is partly rational and partly irrational, and causes the wide fluctuations in crude oil prices, since they have nothing to do with economic realities.”

Major political events of the past four decades include: the 1973 Yom Kippur war; the Iranian revolution of 1979; the Iran-Iraq war from 1980 to 1988; the collapse of the former Soviet Union, the invasion of Kuwait and the Gulf War of 1991; and the Arab spring of 2011 that resulted in the collapse of the Libyan regime. These events all resulted in large and sudden drops in oil production, followed by protracted recoveries.

These events also have the added effect of uncertainty and nervousness in the financial markets. The main problem cited by Pilarski is therefore downward spikes in production and the associated emotional response to political events that accompany them. “The inability to control supply, or a high enough level of production for a sustained period, is the main factor for fluctuating prices in the past and high prices in recent years,” continues Pilarski.

The Organisation of Petroleum Exporting Countries (OPEC) was formed with the main objective of bringing stability to oil prices by controlling crude oil production via production quotas. The 12 countries of OPEC, which

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*Sustained high crude oil and fuel prices are a factor of global supply rather than consumption. The levels of consumption and supply are very close, and there is no rational economic reason why oil prices should remain high in the long-term.*





comprise Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates and Venezuela, basically have the power of a cartel. OPEC has constantly varied its rates of production in relation to global prices since the mid-1960s, and has always cut production when prices have declined.

Non-OPEC countries, which include Russia, have steadily increased their rates of production since the 1960s. In the 1960s and 1970s, the production of non-OPEC countries was not high enough to exert much of an influence of crude oil supply and prices. The spike in the crude oil price in 1979 followed a drop in supply as a result of the Iranian revolution, and the Iran-Iraq war that followed. Global production levels did not return to the same levels until 1996, while GDP grew by 61% over the same period.

Since 1996, when world production stood at about 63 million barrels per day, global crude oil daily production has increased by 10-11 million barrels. This has mainly been due to non-OPEC countries steadily increasing their production levels since the early 1980s. OPEC nations have responded, however, by maintaining a tight control on their own production rates. While OPEC nations have the larger share of known oil reserves (about 72%), their collective production in 2011 was only about 43% of the global total. Moreover, OPEC nations have kept their share of world production at about 43% since 1980, and so have deliberately not produced in proportion with their share of reserves. Saudi Arabia, for example, produces less than 40% of what it was producing in 1979.

Total global production has been kept at 73-74 million barrels per day since 2004 following the rise from 1996 to 2003. While this steady rate of production may at first seem to be the cause of the steady rise in prices, the 0.5% increase in global oil consumption between 2005 and 2011 has to be remembered. "There is currently little difference in levels of demand/consumption and supply, while prices have fluctuated," notes Pilarski. "This highlights the issue of political uncertainty. One factor that has loomed for several years has been the issue of Iran's development of nuclear weapons, and the uncertainty of unrest and military action in the Middle East.

There is also added political uncertainty related to the unclear goals of Russia's and Venezuela's leaders, which has resulted in speculation and nervousness that has caused prices to remain high.

"Saudia Arabia is unwilling to act against Iran on a political or military level, but Saudi Arabia will raise its oil production should an unfortunate event occur," notes Pilarski.

"Sustained high prices will have several effects. The first is for alternatives to be found," continues Pilarski. "Long-term high prices are against the interests of oil producers for this reason, so production rates should also rise. Political events and their related uncertainty are short- to medium-term issues. Once these have gone away, and production rates increase and concerns over supply evaporate, the oil price bubble will almost certainly burst. High prices are economically unsustainable, so the price of crude could drop to as low as \$40 per barrel by 2018."

*Recently released data for the 737 MAX reveals increases in MTOW and longer range compared to the 737NG.*

## Further 737MAX definition

Boeing has released further definitions of the 737MAX, while firm orders bring its sales commitments closer to the A320neo's.

Initial specification data and characteristics of the 737MAX were revealed through family members; the MAX 7, MAX 8 and MAX 9, as equal-sized direct replacements for the 737-700, -800 and -900 variants. Boeing's initial statement in 2011 was that with the CFMI LEAP-1B engine, the 737MAX family members will burn about 4% less fuel than their counterparts in the A320neo family.

Besides this, other information released in 2011 was that the 737MAX will have various airframe design changes to effect the desired fuel burn reduction, as well as an electronic air bleed system as used by the 787.

A stated design feature in 2011 was that the MAX variants would have longer-range performance than their 737NG equivalents. Boeing has recently released specification weight data which reveals the maximum take-off weight (MTOW) of each variant and its range with a full passenger load. The MAX variants will have 400-540nm longer range than the NG variant they are replacing. Boeing has also revealed its design of a new winglet that will be used on the 737 MAX. This feature will contribute to it achieving its stated design and fuel burn performance goals.

The 737 MAX 7 will have an MTOW of 159,400lbs and range of 3,800nm; 400nm longer than the 737-700's. The 737 MAX 8 will have an MTOW of 181,200lbs and a range of 3,620nm, while the 737 MAX 9 will have an MTOW of 194,700lbs and a range of 3,595nm.

No other weight or fuel capacity specification data, or information relating to the 737 MAX's maintenance programme, on-board maintenance computer terminals and utilisation of electronic flightbags and electronic technical logs have yet been released. **AC**

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