



Summary of Chartwell's Breakfast Discussion, No. 44

“The New Energy Revolution”

A discussion held at the Royal Automobile Club with Financial Times Commodities Editor Javier Blas and Editor-at-Large of Petroleum Economist Derek Brower.

Wednesday 5th June 2013

1. The US “could be become the world’s biggest oil producer”

New shale production technologies have triggered a revolution in US energy production.

In the last five years, gas output has risen from 17 trillion cubic feet annually, to a present level of 25+ trillion cubic feet and is predicted to rise further, thus driving down gas prices. This additional volume is the equivalent to half of what the EU consumes, and exceeds current China’s current annual consumption.

Oil output has also risen: from 5.7 million barrels per day to a peak of 8.5 million barrels per day in 2008. Current projections suggest it may rise as high as 11 million barrels per day during 2015-16. This would make the US the world’s third largest producer of oil, behind Saudi Arabia and Russia. However oil prices have remained at historically high levels. This boom has rehabilitated the image and outlook for the US oil industry.

2. OPEC members have differing world views and circumstances

OPEC is a broad coalition of members with interests as diverse as Venezuela, Angola and Iraq. Member countries produce different qualities of crude oil, ranging from highly viscous “sour” to watery “sweet” crude. They also export to different markets. Saudi Arabia is the dominant player and is not afraid to use its position as the world’s biggest oil producer to coerce the rest of the cartel.

3. Saudi Arabia is “sanguine” about US production

Saudi Arabian crude is highly viscous whilst US shale crude is watery. Those US refineries set up to process viscous crude have continued to import 1.4 million barrels of Saudi crude, despite the leap in US oil production. China imports around 47% of its oil from the Middle East, whilst Japan imports almost 100%.

OPEC members that export sweet crude have been much more adversely affected by the US shale revolution – for example Nigerian exports of sweet crude to the US have collapsed.

4. US shale production has already had important geopolitical implications

The cushioning effect of US production has given it more freedom to sanction OPEC members without risking a hike on oil prices. This factor was key in persuading Japan, South Korea, China and Turkey to tighten restrictions on Iran.

5. Don’t expect the US to become energy isolationist

The boom in cheap gas and oil has been a stimulus to the US economy and has helped to re-industrialise the southern states. There is the potential for the US to develop a world beating

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petrochemical sector. But even with shale production, the US is not insulated from the global energy market. It remains a net importer of oil and gas and disruptions in OPEC production would cause price rises.

6. There is a floor in the market (\$80-\$90 ppb) below which shale oil is uneconomic

A barrel of shale oil is referred to as a “technical barrel” because the process of extracting it is far more difficult and requires more sophisticated technology, adding cost compared to conventional “primary” supplies. Return on investment is easily threatened with price falls, becoming uneconomic at \$80-\$90 per barrel.

7. Shale gas is not as green as it seems

The volume of US shale gas production has led to bottlenecks and oversupply which has forced rigs to flare significant volumes of gas. This activity will drive up US fossil fuel emissions.

US shale gas production has driven down US thermal coal prices, driving exports to energy poor markets such as Europe whose carbon emissions have risen proportionately.

8. OPEC’s real fear is stagnating growth in China and innovation in automobile engineering

The real fear for Middle Eastern producers is a Chinese economic slowdown, which would reduce its thirst for oil and gas.

OPEC also wants rising car ownership amongst the Indian and Chinese middle classes to stimulate new demand. Potential remains high: in OECD countries car ownership currently stands at 500 per 1000 people. In China it is only 33.

A second fear is that historically high fuel prices will incentivise automotive and aerospace manufacturers to design highly efficient engines that will mitigate a rise in demand. A breakthrough in either hybrid fuel efficient engines or alternatives to petroleum and diesel would be potentially disastrous.

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