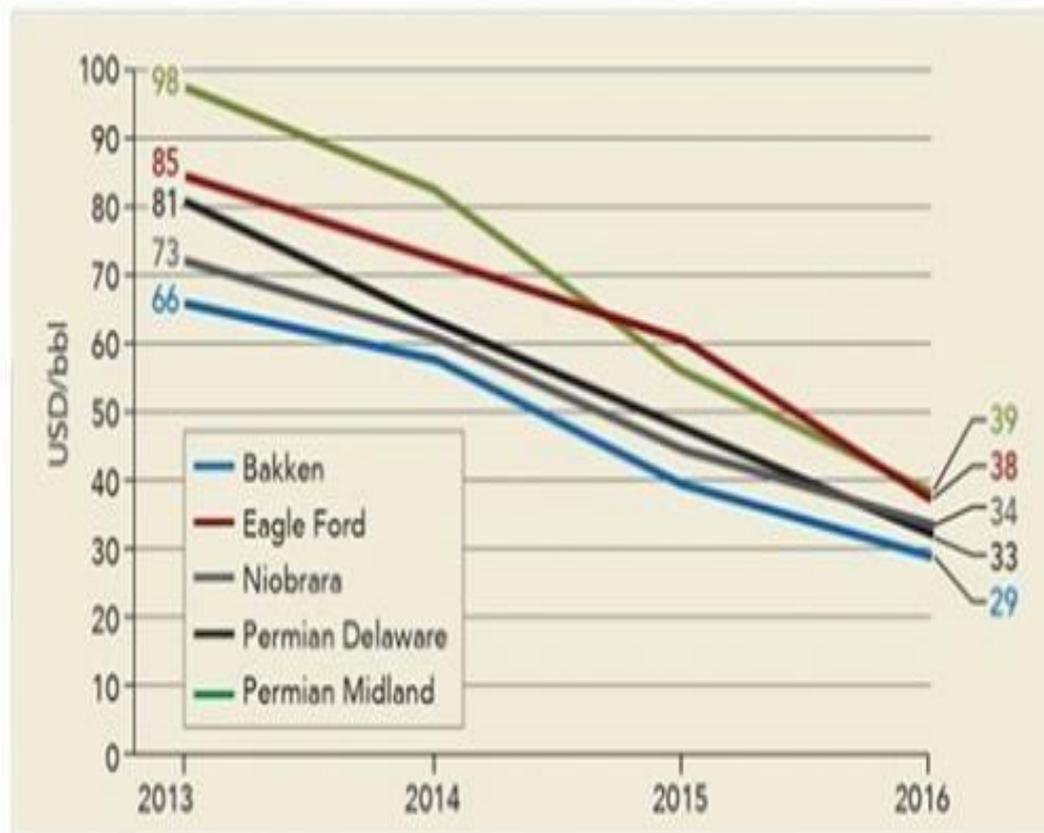


How OPEC Lost The War Against Shale, In One Chart

By Tyler Durden – Zero Hedge

At the start of March we showed a fascinating chart from Rystad Energy, demonstrating how dramatic the impact of technological efficiency on collapsing US shale production costs has been: in just the past 3 years, the wellhead breakeven price for key shale plays has collapsed from an average of \$80 to the mid-\$30s...

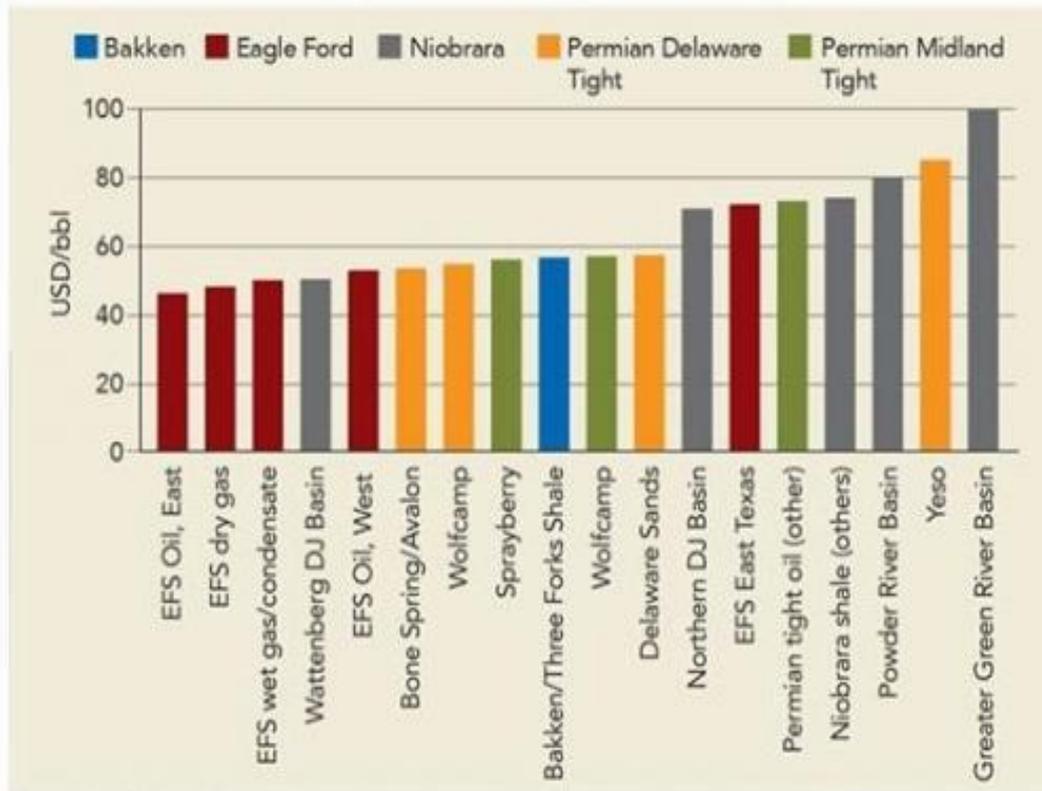
F1: DEVELOPMENT IN WELLHEAD BREAKEVEN PRICES FOR KEY SHALE PLAYS



Source: Rystad Energy NASWellCube

resulting in drastically lower all-in break-evens for most US shale regions.

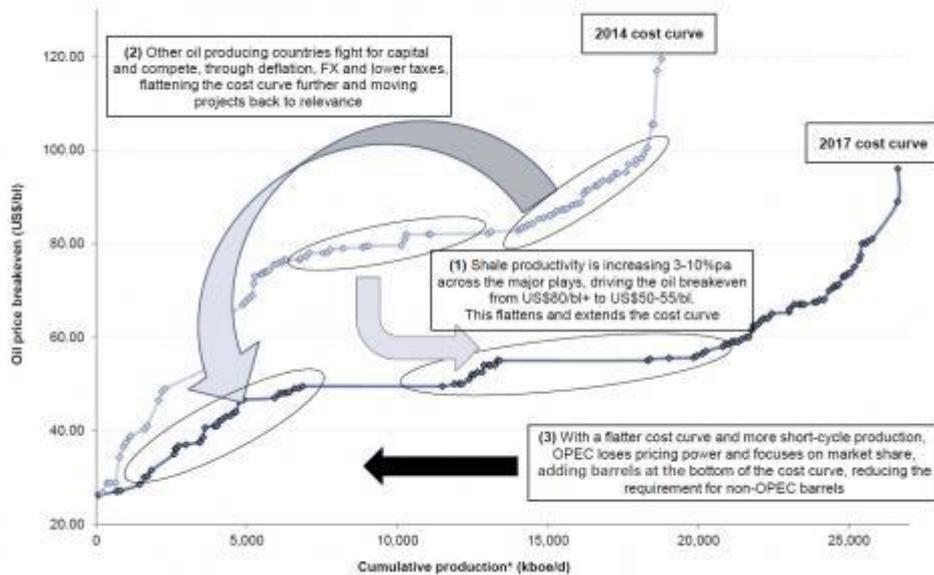
F2: AVERAGE WTI BEP FOR NEW SHALE WELLS PER PLAY



Source: Rystad Energy UCube

Today, in a note released by Goldman titled "OPEC: To cut or not to cut, that is the question", the firm presents a chart which shows just as graphically how exactly OPEC lost the war against US shale: in one word: the cost curve has massively flattened and extended as a result of "shale productivity" driving oil breakeven in the US from \$80 to \$50-\$55, in the process sweeping Saudi Arabia away from the post of global oil price setter to merely inventory manager.

Exhibit 2: Short-cycle shale has engendered a structural deflationary cycle
Pre-sanction cost curve in 2017 vs. 2014 for non-OPEC from our Top Projects database



Source: Goldman Sachs Global Investment Research

This is how Goldman explains it:

Shale's short time to market and ongoing productivity improvements have provided an efficient answer to the industry's decade-long search for incremental hydrocarbon resources in technically challenging, high cost areas and has kicked off a competition amongst oil producing countries to offer attractive enough contracts and tax terms to attract incremental capital. This is instigating a structural deflationary change in the oil cost curve, as shown in Exhibit 2. This shift has driven low cost OPEC producers to respond by focusing on market share, ramping up production where possible, using their own domestic resources or incentivizing higher activity from the international oil companies through more attractive contract structures and tax regimes. In the rest of the world, projects and countries have to compete for capital, trying to drive costs down to become competitive through deflation, FX and potentially lower tax rates.

The implications of this curve shift are major, all of which are very adverse to the Saudis, who have been relegated from the post of long-term price setter to inventory manager, and thus the loss of leverage. Here are some further thoughts from Goldman:

- **OPEC role: from price setter to inventory manager** In the New Oil Order, we believe OPEC's role has structurally changed from long-term price setter to inventory manager. In the past, large-scale developments required seven years+ from FID to peak production, giving OPEC long-term control over oil prices. US shale oil currently offers large-scale development opportunities with 6-9 months to peak production. This short-cycle opportunity has structurally changed the cost dynamics, eliminating the need for high cost frontier developments and instigating a competition for capital amongst oil producing countries that is lowering and flattening the cost curve through improved contract terms and taxes.

- **OPEC's November decision had unintended consequences:**

- **OPEC's decision to cut production was rational and fit into the inventory management role.** Inventory builds led to an extreme contango in the Brent forward curve, with 2-year fwd Brent trading at a US\$5.5/bl (11%) premium to spot. As OPEC countries sell spot, but US E&Ps sell 30%+ of their production forward, this was giving the E&Ps a competitive advantage. Within one month of the OPEC announcement, the contango declined to US\$1.1/bl (2%), achieving the cartel's purpose. However, the unintended consequence was to underwrite shale activity through the credit market.

- **Stability and credit fuel overconfidence and strong activity:** A period of stability (1% Brent Coefficient of Variation ytd vs. 6% 3-year average) has allowed E&Ps to hedge (35% of 2017 oil production vs. 21% in November) and access the credit market, with high yield reopen after a 10- month closure (largest issuance in 4Q16 since 3Q14). Successful cost repositioning and abundant funding are boosting a short-cycle revival, with c.85% of oil companies under our coverage increasing capex in 2017.

That said, the new equilibrium only works as long as credit is cheap and plentiful. If and when the Fed's inevitable rate hikes tighten credit access for shale firms, prompting the need for higher margins and profits, the old status quo will revert. As a reminder, this is how over a year ago Citi explained the dynamic of cheap credit leading to deflation and lower prices:

Easy access to capital was the essential “fuel” of the shale revolution. But too much capital led to too much oil production, and prices crashed. The shale sector is now being financially stress-tested, exposing shale’s dirty secret: many shale producers depend on capital market injections to fund ongoing activity because they have thus far greatly outspent cash flow.

This is the key ingredient of what Goldman calls the shift to a new "structural deflationary change in the oil cost curve" as shown in chart above. As such, there is the danger that tighter conditions will finally remove the structural pressure for lower prices. However, judging by recent rhetoric by FOMC members, this is hardly an imminent issue, which means Saudi Arabia has only bad options: either cut production, prompting higher prices and even greater shale incursion and market share loss for the Kingdom, or restore the old status quo, sending prices far lower, and in the process collapsing Saudi government revenues potentially unleashing another budget crisis.