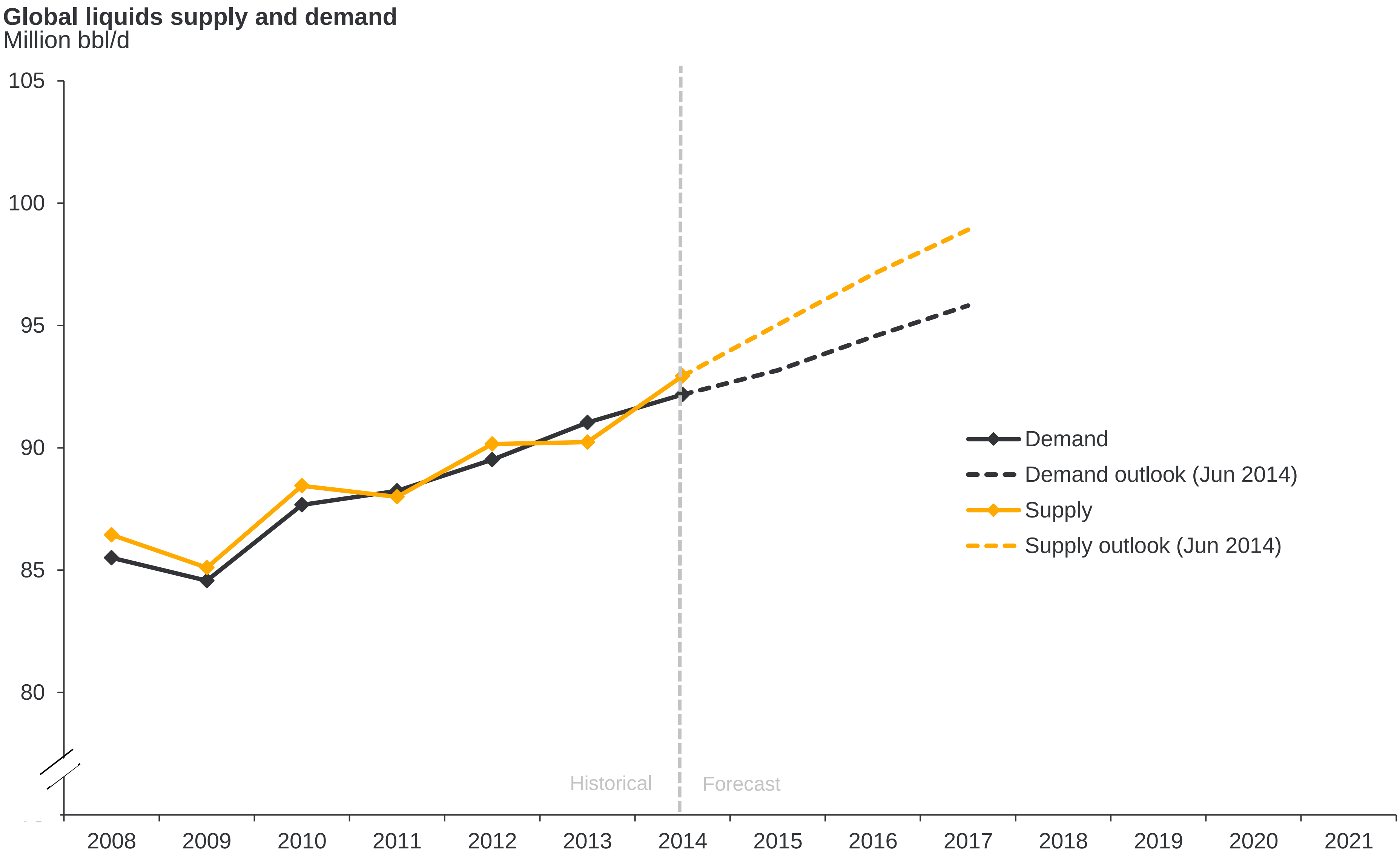
GLOBAL OIL MARKET TRENDS

PER MAGNUS NYSVEEN
EIA WORKSHOP ON OIL MARKETS
WASHINGTON DC
SEPTEMBER 2016

28 September 2016

RYSTAD ENERGY

Once upon a time, in 2014, a huge imbalance between supply and demand was in the making

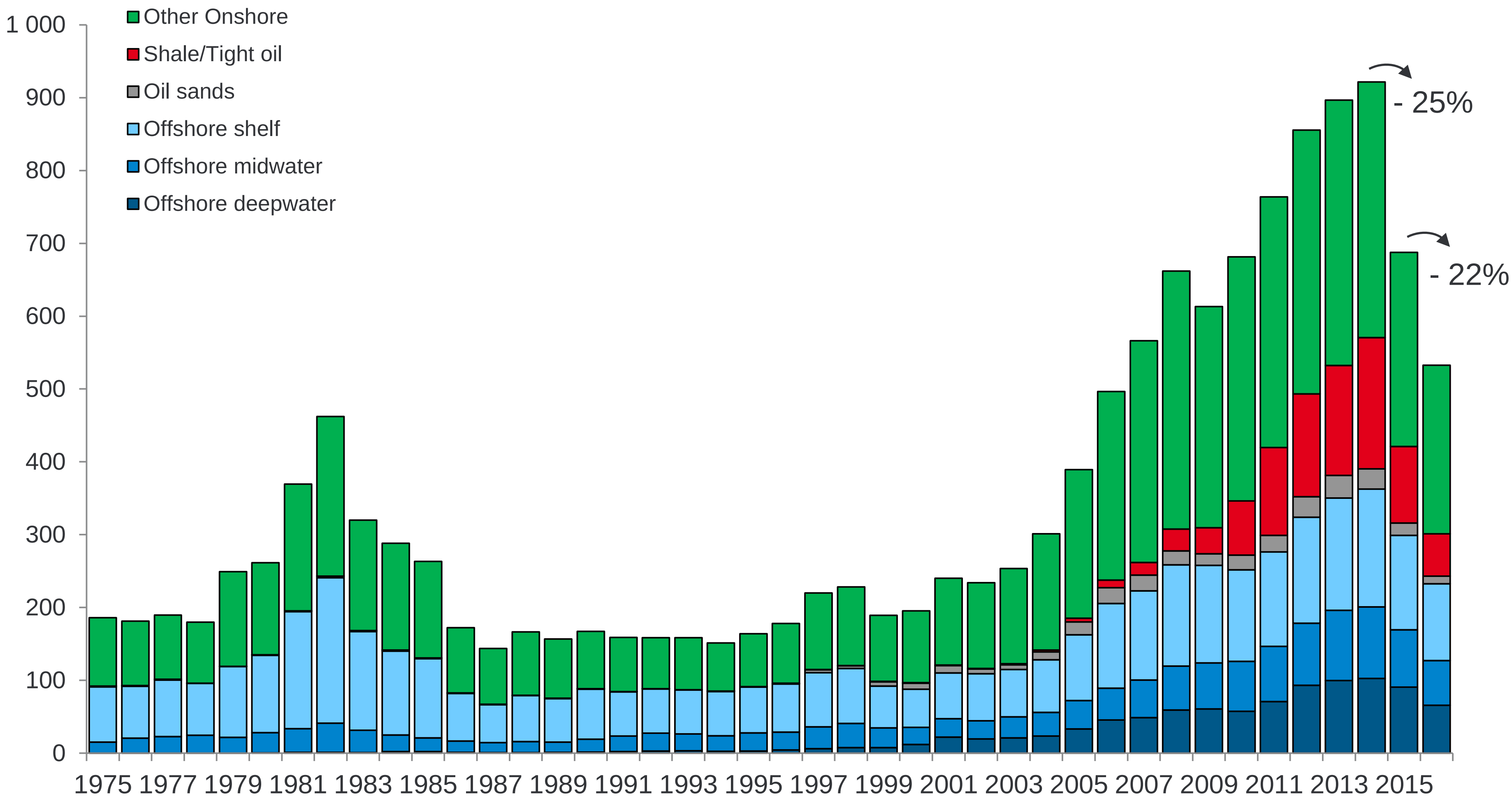


2014 June 18: www.rystadenergy.com/NewsEvents/PressReleases/oil-markets-increasing-risk-of-oversupply-despite-sustained-issues-around-opec-supply-

Source: Rystad Energy research and analysis, UCube, IEA

We are witnessing the biggest drop in investments ever in the oil & gas industry

Investments in the global E&P industry
USD billions (real 2016 dollars)



Source: Rystad Energy UCube

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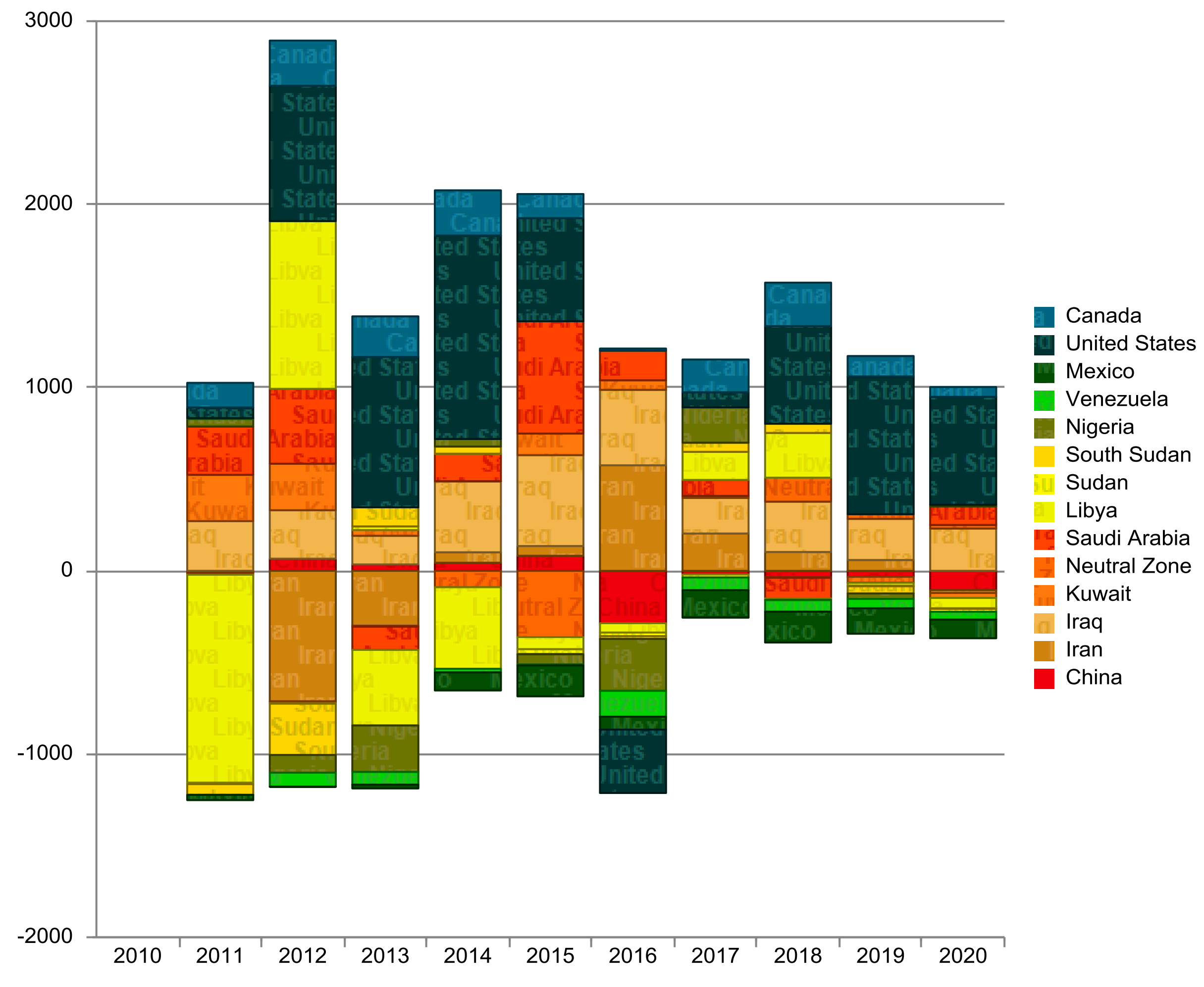
Production outlook M/M and Y/Y by key countries

We expect slow return of oil in countries affected by political or economic crises like Libya, Nigeria, Venezuela, South Sudan.

Strong growth from US oil will be needed to balance oilmarkets as soon as markets rebalances.

We see core-Opec will not significantly increase market shares, revenue is probably maiximized at flat production levels with US growth to a large extent meeting world demand growth.

kbbld Y/Y, liquids

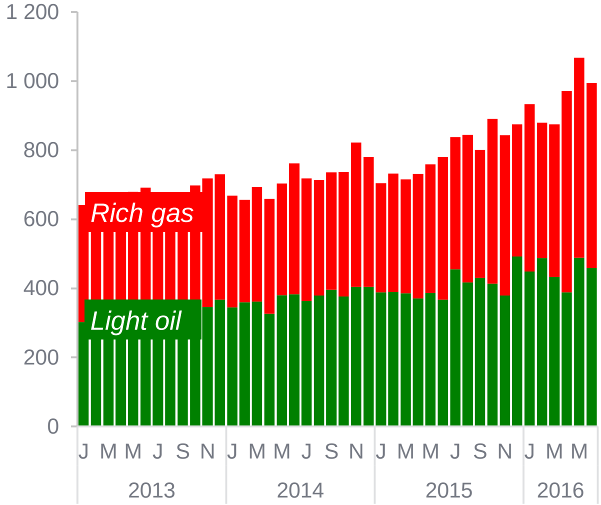


Source: Rystad Energy UCube

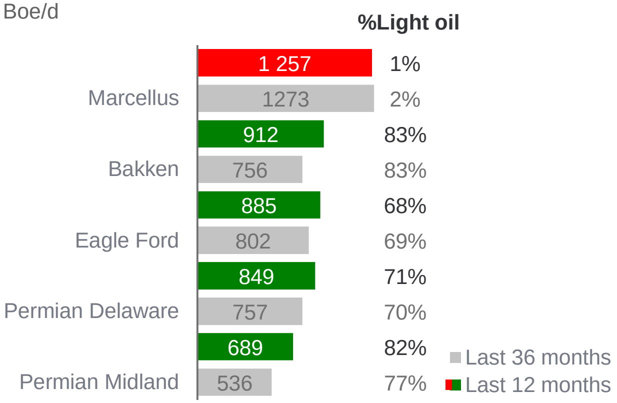
Three indicators of well productivity – shale oil base decline today is 40% lower than in Dec14

Initial Production rate (IP)

Average 30-day IP rate per horizontal well
Boe/d



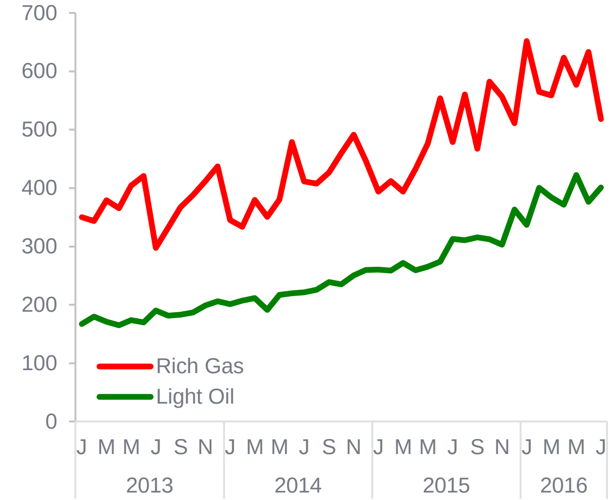
Average 30-day IP rate per horizontal well by play
Boe/d



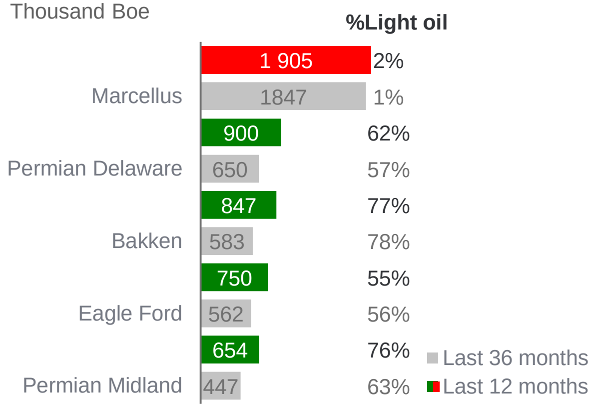
- **The most impressive initial production improvements during 2016 are observed in Permian Midland and Bakken**

EUR / Well

Average EUR per horizontal well
Thousand Boe



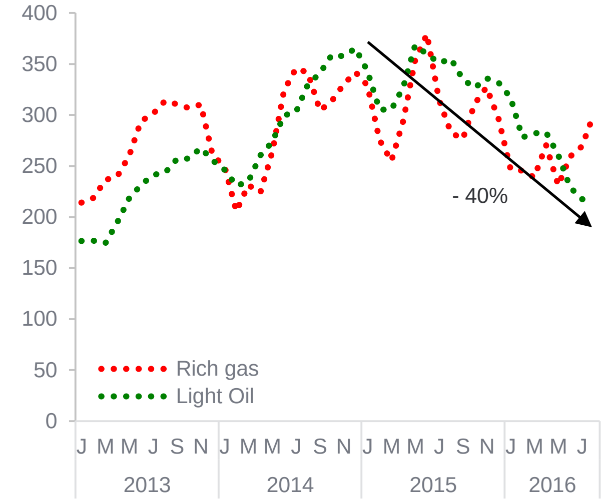
Average EUR per horizontal well by play
Thousand Boe



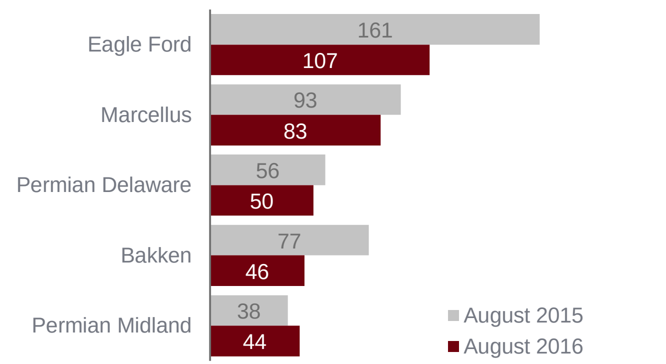
- **Recent wells in Permian Delaware exhibit the largest ultimate potential among liquid plays**

First Month Legacy Production Decline

First month legacy production decline
Thousand boe/d



First month legacy production decline by play
Thousand boe/d



- **Permian Midland is the only major play with larger base decline in August 2016 than in August 2015**

Source: NAS Report

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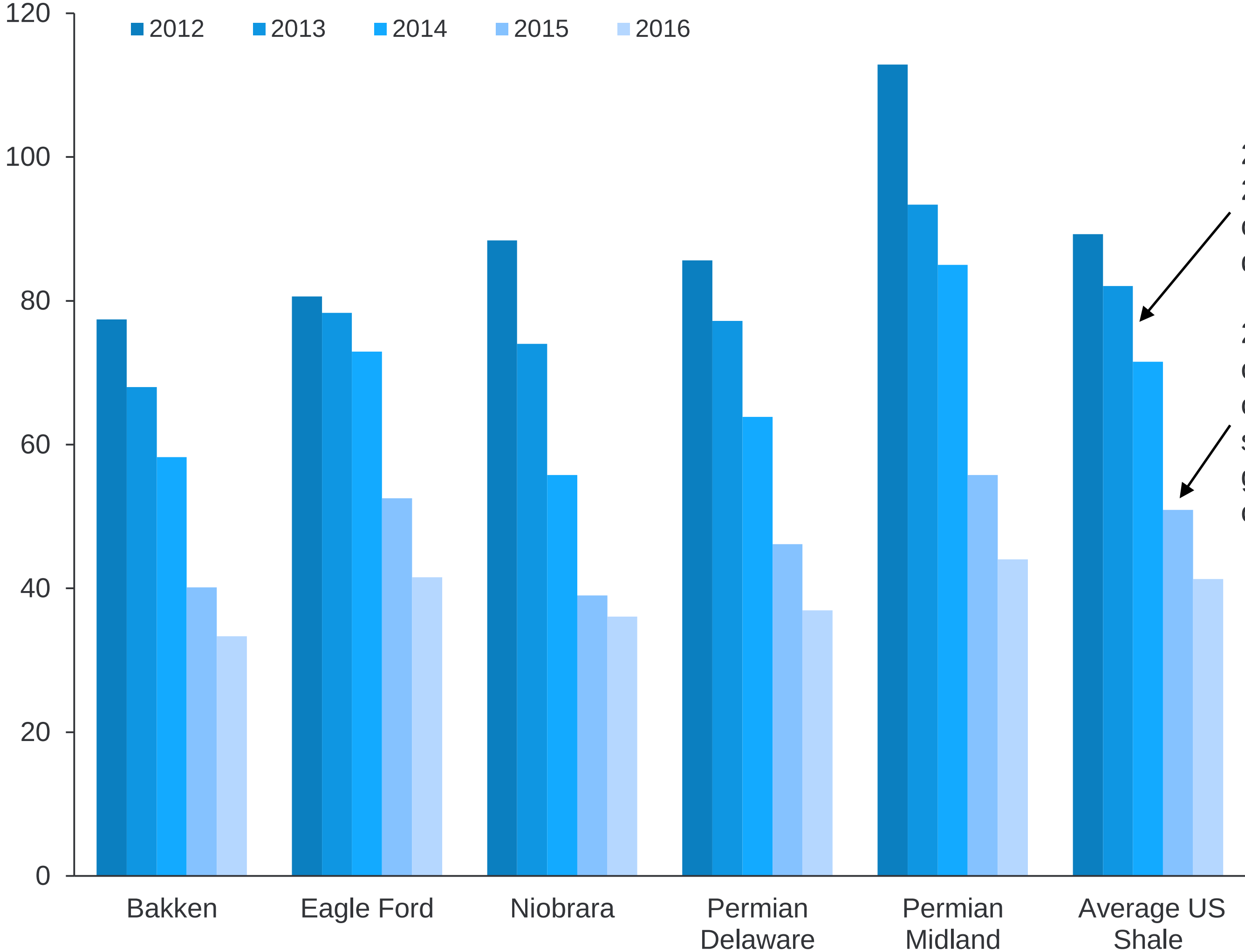
Breakeven prices has decreased 50% over 4 years, 1/3 of this is driven by sustained efficiency gains

Average wellhead breakeven price for different plays and spud years
USD/bbl



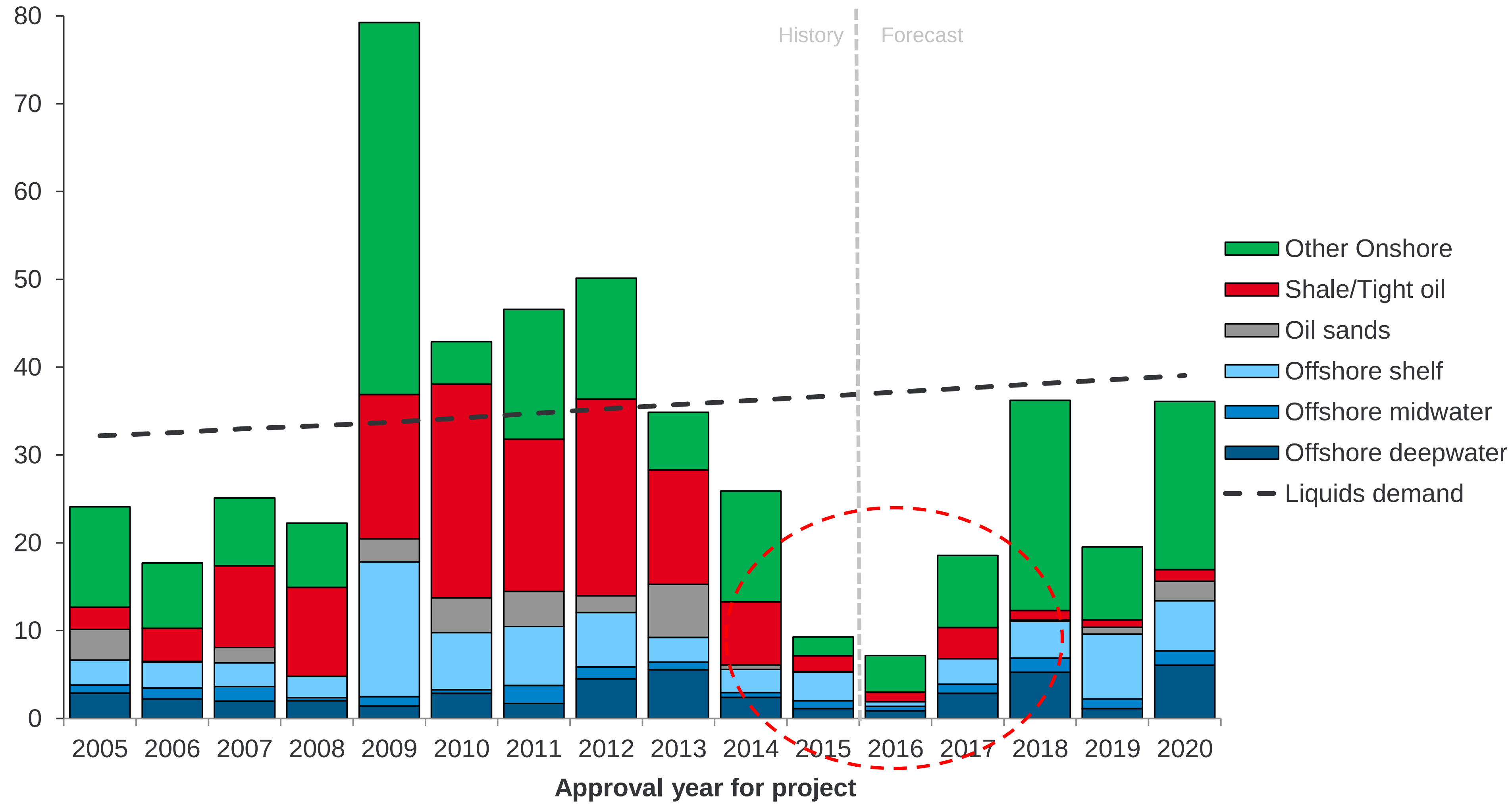
2012-2014:
2/3 is one-off cost compression due to pad drilling

2014-2016: 2/3 is cyclical cost compression due to service costs and high grading of equipment, crew and locations

Source: NASWellCube Premium

What about supply responses affecting the medium term?
Sanctioning of new fields has collapsed to alarmingly low levels…

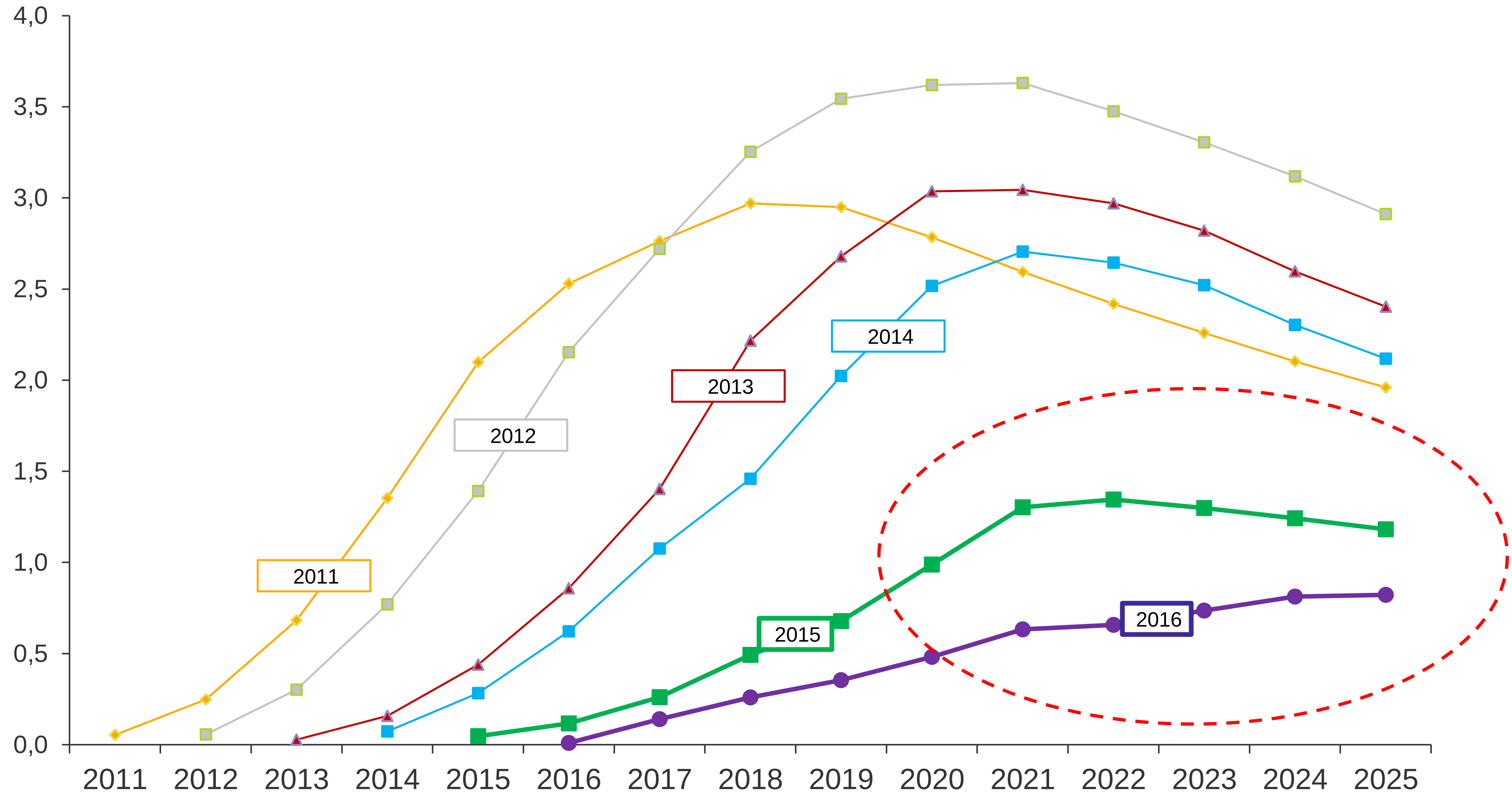
Total liquids resources in fields, by approval year for the project
Billion boe



Source: Rystad Energy UCube

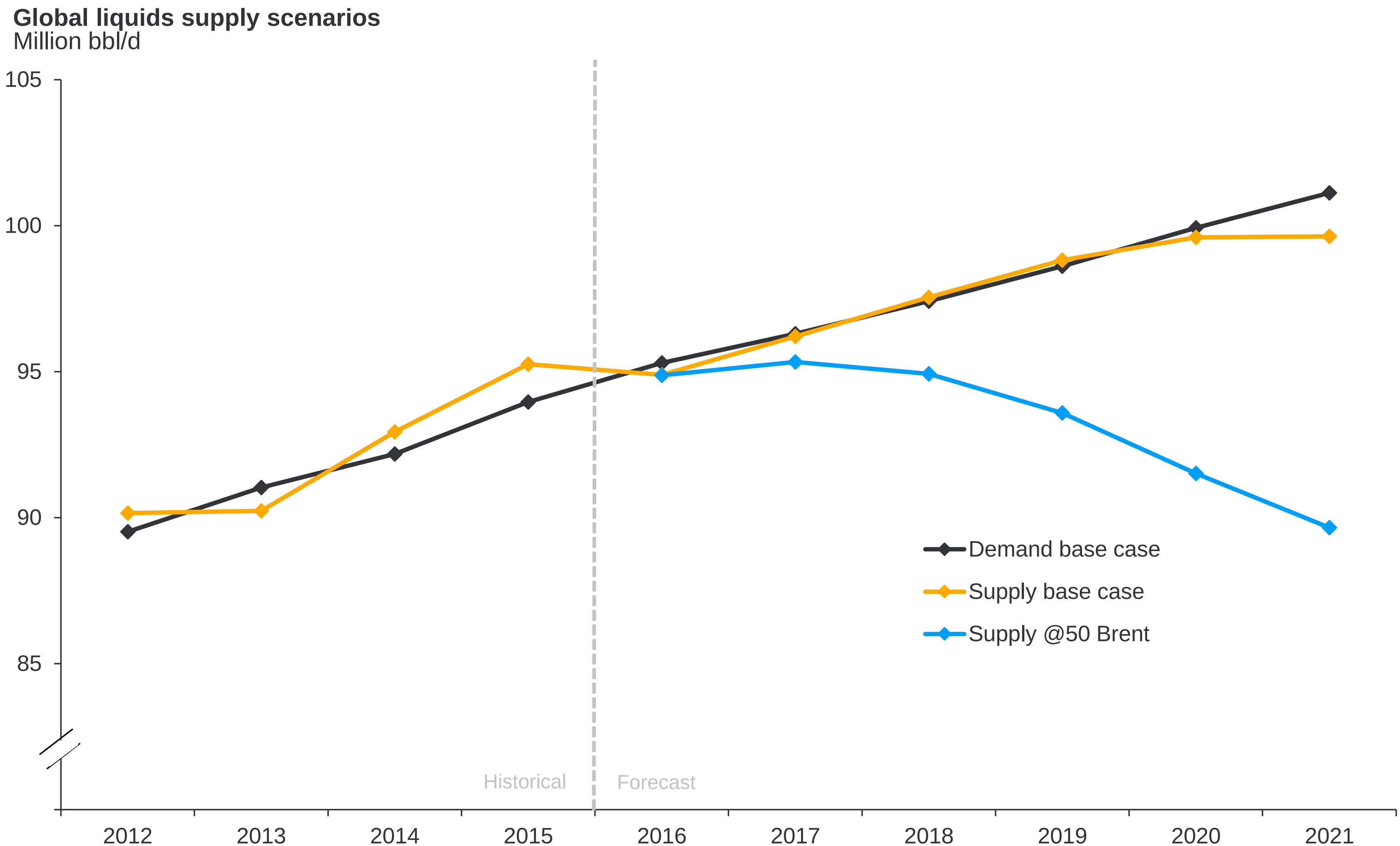
..and the supply impact will be felt 5-7 years down the line - less than half of normal volumes

Oil field production profiles (excl. shale assets) by approval year
Million bbl/d



Source: Rystad Energy UCube

Brent at 50 USD/bbl is too low after 2017 as supply will not be able to grow



Source: Rystad Energy research and analysis, UCube

Thank You !

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